

This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + Refrain from automated querying Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at http://books.google.com/

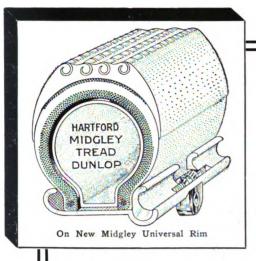


Protes would wholevele

Transportation
Library
TL

IM 9 4
V. 17, No14- N./8, hr./2,





The New York Park Board's **Ruling Against Chains on Tires**

has no terrors for the thousands of users of Hartford Midgley Tread Tires. They are "Legal" in any Park or on any road anywhere. Owners know by experience that their car and its occupants are safeguarded against the Dangerous Side Slip by



easily the greatest non-skid device of the age. Absolutely Safe, Sound, Successful and Sightly.

Four coils of heavy steel piano wire vulcanized right in the heavy tread of the highest quality Hartford Tire, which means the very best in the world, makes the tire get a grip on the ground like "cat's claws." See cuts. Made in Clincher and Dunlop.

At the New York and Chicago National Automobile Shows Hartford Midgley Tread Tires predominated Six for One over any other make. Especially were they conspicuous on "Classy" Town and Touring Cars. Hartford Midgley Tread Tires have won more Hill Climbing, Road and Touring Records the past season than any five combined of any other make. Endorsed by the Press, Professional Chauffeurs and Owners.

MILLIMETRE SIZES FOR FOREIGN CARS

Get Them On Your Car NOW

THE HARTFORD RUBBER WORKS COMPANY

HARTFORD, CONN.

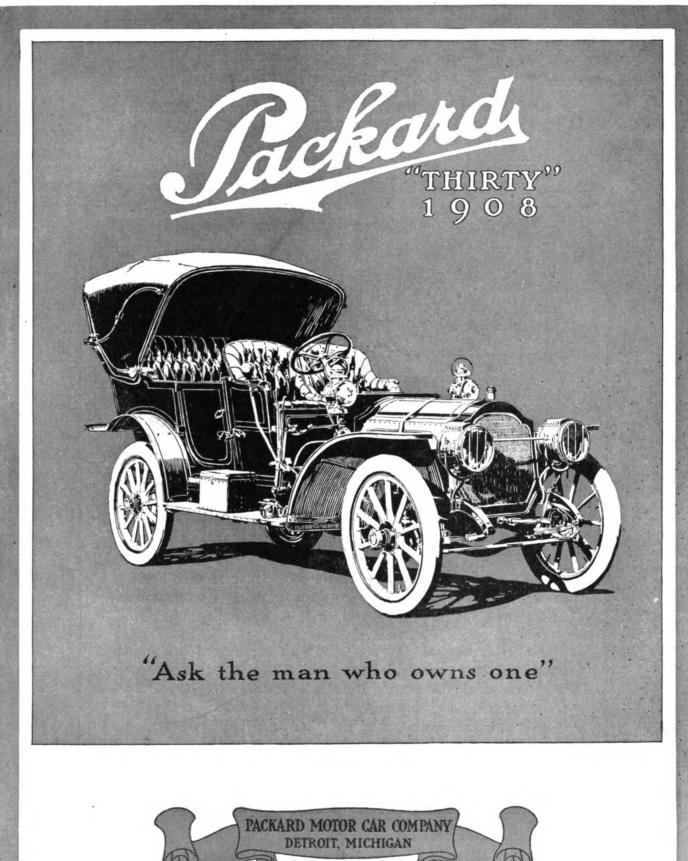
BRANCHES:

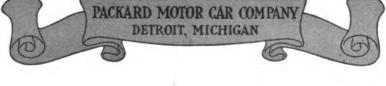
BRANCHES:

NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 494 Atlantic Ave. and 817 Boylston St.; CLEVELAND, 1831 Euclid Ave.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; BUFFALO, 725 Main St.; ATLANTA, GA., 55 Auburn Ave.; LOS ANGELES, 1505 So. Main St.; SAN FRANCISCO, 423-433 Golden Gate Ave.

Agencies: Gugler Electric Mfg. Co., Minneapolis; The St. Louis Tire Agency, 3685 Olive St., St. Louis, Mo.; Mercantile Lumber & Supply Co., Kansas City; F. P. Keenan Co., Portland (Ore.); Salt Lake Hardware Co., Salt Lake City; Compania Mexicana de Vehiculos Electricos, City of Mexico.









THOMAS

THE E. R. THOMAS MOTOR CO. presents four styles of chassis and nineteen styles of bodies

Thomas 4-20 Town Car

Combines luxury with utility and necessity; designed particularly for city and suburban use in good or bad weather, for calling and shopping, for the theatre, for social functions and touring on good roads. This car is furnished with brougham, landaulet, cabriolet, limousine and doctor's car bodies. In Europe this style of car is the vogue, as it rapidly is becoming in America. Prices, \$3,000 to \$3,250.

Thomas 4-40 Detroit

A marvel of smooth and quiet running with a dash in operation and distinctive style in appearance that denotes the thoroughbred and fascinates the most critical. The 4-40 has been strengthened and improved where the wisdom of experience has suggested. It is especially designed to successfully eclipse at a much lower price, shaft driven cars of the highest price and class. It is equipped with runabout, touring and limousine bodies. Prices, \$2,750 to \$3,750.

Thomas 4-60 Flyer

The Old Reliable is smoother, snappier, faster, lighter, quieter and roomier than ever. It has been redesigned and refined until it has become one of the most beautiful and stylish cars to be seen. The mechanical changes are largely refinements, though the motor generates more power. A bearing between each cylinder is still one of its chief characteristics. It is equipped with runabout, tourabout, landaulet and limousine bodies. Prices, \$4,500 to \$5,700.

Thomas 6-70 Special

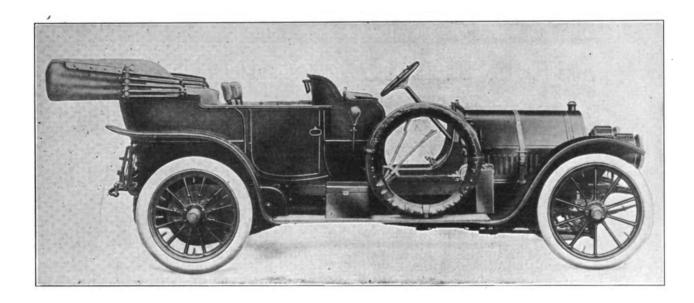
This is the climax of automobile construction, and is one of the most powerful and flexible cars made, retaining as it does, the structural principles that have counted so much for reliability in the Thomas 4-60 Flyer. There is not a single experimental feature in its entire construction. For speed, smooth running on hills and bad roads, and for slow speed, all on the high gear, the 6-70 Special is not equalled. It is equipped with runabout, touring, landaulet and limousine bodies. Prices, \$6,000 to \$6,900.

E. R. Thomas Motor Co.

Members A. L. A. M.

BUFFALO, NEW YORK

POPE-TOLEDO



Characterized by extreme elegance of appointments, simplicity of design, and superb finish.

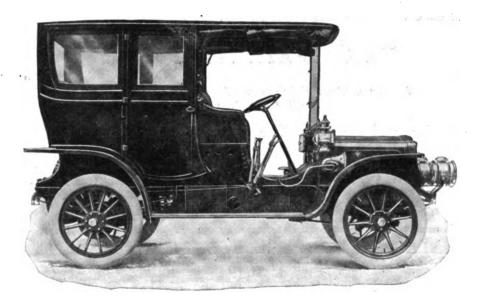
Quiet, Comfortable and Very Speedy

Shrewd long headed dealers have been strongly impressed with the wonderful showing made by the Pope-Toledo at New York and Chicago Shows.

Live dealers in unoccupied territory are invited to correspond with us.

Pope Motor Car Company, Members Toledo, Ohio

THE INCOMPARABLE WHITE THE CAR FOR SERVICE



Exclusive Features of the White Limousine

The exclusive White quality of absolute noiselessness of operation is of particular advantage in a limousine because, in a car with a closed body, any noise made by the mechanism is even more noticeable and annoying than in an open vehicle.

Another exclusive White quality—namely—genuine flexibility of control, permits of the machine being guided safely and speedily through the crowded city streets. The speed of the White may be accommodated to the exigencies of street traffic without any changing of gears, jerky starts or the embarrassing and sometimes dangerous "stalling" of the engine.

As regards graceful lines and luxuriousness of equipment and finish, the White limousine must be seen to be appreciated.

Write for catalog and the address of the nearest branch or agency

THE WHITE COMPANY

CLEVELAND, OHIO



The Anti-Fatigue Car

It never grows weary of well doing. All are beginning now to realize what the users of it and its builders always have known—that the



American Locomotive Motor Car

is the "greatest touring car in the world, bar none." Tourists boast that with this machine they can always keep their schedule and those who have driven it farthest, say:

"IT STAYS NEW"

Imported Materials.

American Workmanship.

Vanadium, "the anti-fatigue metal," is in ALL its steel and iron. What lasts best, is best.

The energies and backing of a \$50,000,000 company are behind it.

AMERICAN LOCOMOTIVE AUTOMOBILE COMPANY
1886 BROADWAY, NEW YORK Factory, Providence, R. L.

AMERICAN LOCOMOTIVE AUTOMOBILE AGENCY
Pittsburg

PARK Sq. AUTO STATION

W. W. SHAW Co.

BERGDOLL MOTOR CAR Co. Philadelphia, Pa.

The best Resolution you can make for 1908

is to refuse <u>absolutely</u> to accept "just as good" or "better" tires as substitutes for <u>Morgan & Wright's</u>

MORGAN & WRIGHT TIRES

ARE GOOD TIRES

All styles of treads

Morgan & Wright, Detroit

Branches, Agencies or Dealers everywhere



like SOLAR LAMPS—"show the way."
They <u>lead</u> for reason of having the only <u>practical</u> and scientific principle for the <u>generation</u> of Acetylene Gas.

The heavy seamless shells of SOLAR Generators are drawn from ONE SOLID PIECE OF BRASS. This insures positively and permanently against leakage. Square and oblong generators, riveted and soldered from sheets are not practical.

from sheets are not practical.

The SOLAR patent wick feed is ONE MORE POINT in its favor. Write for a copy of our booklet No. 9, for full description.

BADGER BRASS MFG. COMPANY TWO FACTORIES

Kenosha, Wis. and New York City



'Keep Your Eye On Continentals!"

Continental

"Ready-Flated" Tires. These tires are the sensation of the season. They are carried already inflated on Continental Demountable Rims, ready for instant use in replacing a tire that is punctured. Exhibited at the Importers Salon, New York. Can also be seen at any of our branches or agencies or at dealers in motor supplies throughout the country.

"Rouge-Ferre" (Anti-Skid.) This is the standard Anti-Skid Tire of the world. Steel studs with rivet heads are embedded in the tread during the process of manufacture, and are so firmly held in position that they cannot work loose or be torn out. Cars equipped with these tires are guaranteed not to skid under any conditions. These tires can be used in parks and on drives and boulevards where chains are prohibited by the local authorities.

New Prices. Continental Tires are offered this season on a new schedule of prices more favorable to the purchaser than any previously made by us. The immense volume of business that has come to us from our branches all over the world enables us to manufacture with greater economy without lowering the quality of the tires. Continentals are known as "the low cost per mile tires." They have a larger sale than any other tire which is some indication of the way they are regarded by motorists generally.



CONTINENTAL CAOUTCHOUC COMPANY

JOE M. GILBERT, General Manager

43 Warren Street, New York

BRANCHES

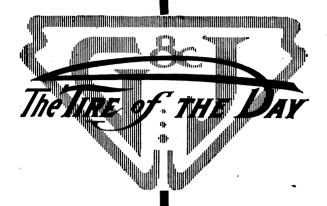
Buffalo-729 Main Street. Detroit-226 Jefferson Avenue. New York City—2100 Broadway. San Francisco—422-424 Van Ness Avenue.

DISTRIBUTING AGENTS:

Continental Agency Co., 1268 Euclid Ave., Cleveland, O. Jas. L. Gibney & Bro., 211 No. Broad St., Philadelphia, Pa. Neustadt Automobile & Supply Co., 3948 Olive St., St. Louis, Mo. Plant Rubber Co., 322 First Ave. No., Minneapolis, Minn.

The Post & Lester Co., 821 Boylston St., Boston, Mass. Revere Rubber Co., 700 Baronne St., New Orleans, La. Western Continental Caoutchouc Co., 1438 Michigan Ave. Chicago, Ill.

NEVER MIND WHAT THE OTHER FELLOW SAYS



It will be well also

to select the

Universal Midglev rims

which fit any make of Clincher or Dunlop tire.

improved 1908

There is a vast difference between 1908 G & J tires and those said to be "just as good." Don't let someone else select your tire equipment by telling you that some other make is just as good or better than G & I, but make your own comparisons—use your own judgment and insist upon getting the BEST tires—the kind you want—G & J.

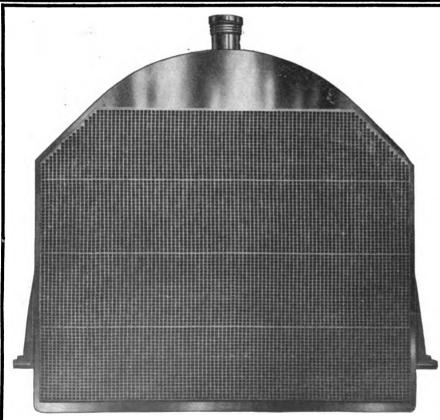
INDIANAPOLIS. IND.

BRANCHER Cleveland—New No. 1837 Euclid Avenue. Chicago—1434 Michigan Avenue. San Francisco—423-433 Golden Gate Avenue.

AGENCIES.

G & J Tire Agency. 1528 Court Place, Denver, Colo. G & J Tire Agency, 912 Main St., Buffalo, N. Y. G & J Tire Agency, 711 N. Broad St., Philadelphia, Pa. Western Rubber & Supply Co., 1010 S. Main St., Los Angeles, Cal.
Plant Bros., 21 S. Second St., Minneapolis, Minn. Omaha Rubber Co., 11th & Farnum Sts., Omaha, Neb. Pittsburg Rubber Co., 913-915 Liberty Ave., Pittsburg, Pa.

Alexander-Elyea & Co., 35 N. Pryor St., Atlanta, Ga. Syracuse Rubber Co., 212-214 S. Clinton St., Syracuse N. Y. Rochester Rubber Co., 55 Main St. E., Rochester, N. Y. Jerome P. Parker Co., 181-183 Madison St., Memphis, Tenn. Day Rubber Co., 415 N. Fourth St., St. Louis, Mo. Enterprise Rubber Co., 110 Federal St., Boston, Mass. West Coast Supply Co., Portland, Ore.



It's not what we say, but what Mayo Radiators have done, that has led to their adoption by America's best cars.

U"What's worth doing at all is worth doing well," is the policy on which Mayo Radiators were built and will continue to be built.

■ Largely increased facilities enable us to take on a few new customers of the kind that place quality before price.

The Mayo Radiator is The Quality Radiator.

If you are a Quality Maker better write us at once.

> HONEYCOMB, CELLULAR OR FLAT TUBE TYPES.

MAYO RADIATOR COMPANY, New Haven, Conn.

TO AUTOMOBILE MANUFACTURERS

AND TIRE BUYERS IN GENERAL

Before you let "Stand Pat Dust" get into your eyes, consider just what the "standpatters" stand pat on, and are they "standing pat"?

Are you paying for "definite policy" tire quality without a guarantee that you are getting it?

Think it over and keep your eyes open.

Automobile manufacturers cannot force us to reduce the quality of



On the contrary, our 5,000 mile guarantee forces us to uphold the quality.

We shall meet competition in the future as we have in the past, by making the <u>best</u> tire possible, backing it by the <u>best</u> guarantee practicable and selling it at a margin of profit that will allow us to remain permanently in the tire business.

Ajax Tires will continue to uphold their

GUARANTEE OF 5,000 MILES RIDING

and it naturally follows that to uphold that guarantee, they must uphold their quality, and to uphold that quality they must uphold their price.

Take your choice, gentlemen.

The policy of "stand pat" in public, without the guarantee that certifies to standing pat in private, or—

The policy of a "square deal" with a guarantee that makes square dealing a logical certainty.

HORACE DE LISSER, President

AJAX-GRIEB RUBBER COMPANY Factories at Trenton, N. J.

Office, N. E. Cor. 57th St. & Broadway, New York

BRANCHES

New York, 1776 Broadway.

Boston, 819A Boylston St.
Chicago, 1418 Michigan Ave.
Detroit, 743 Woodward Ave.

AGENTS IN ALL LARGE CITIES.

Denver, 1529 Cleveland Pl.
Seattle, 1102 Broadway.
San Francisco, 460 Golden Gate Ave.
Los Angeles, 1040 S. Main St.



20 H. P .- \$1,450 fully equipped.

The Man Who Drives

MaxHell"

knows what it is to experience all the pleasures of motoring without that eternal "gnawing at his bankroll' as is the case with a high-priced, costly-to-operate car.

The little overdose of prosperity which resulted in the recent stringency has waked a let of people to the fact that motor-car money's worth does not go hand in hand with fancy horse-power and exaggerated claims.

The "Maxwell" has never been a speed-car or a freak. It has never boasted hyper-horse-power.

It is, and has always been a utility—a necessity—a family car without a "frill" in its construction.

The records it has established in hill-climbs, economy and endurance tests have never been equalled by any other cars, regardless of price.

Mr. J. D. Maxwell's foresight in designing cars of unfailing efficiency, at prices well within the reach of the average citizen has been well rewarded, to judge from the universal satisfaction of the 10,000 "Maxwell" owners.

That is why these days are "Maxwell" days. Every motor-car buyer will now get a follar's worth of motor-car for every dollar he pays, and that is just what the "Maxwell" has always given.

Among the important features which the "Maxwell" was the first to introduce, are the three-point suspension, thermo-siphon cooling and multiple-disc clutch.

That features of such prime importance should have first appeared on cars of such low price—\$825 for the 14 H. P. Tourabout, \$1,450 for the 20 H. P. Touring Car, and \$1,750 for the newsfour-cylinder 24 H. P. Touring Car—is one of the most remarkable incidents of the industry, and is evidence of how far in advance the "Maxwell" line is.

Get a "Maxwell Convincer" at your convenience in any car of the "Maxwell" line. Address Dept. 2.

Benj Brisca President.

Maxwell-Briscoe Motor Company Members A. M. C. M. A.

Main Office: 40 Mt. Pleasant St., Tarrytown, N. Y. FACTORIES:

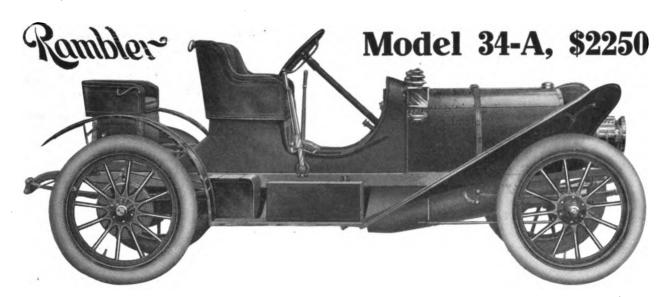
Chicago, Ill., Pawtucket, R. I., New Castle, Ind.

DEALERS IN ALL LARGE CITIES



24 H. P. Touring Car, \$1,750.

THE CAR OF STEADY SERVICE



A CAR THAT HAS BEEN TRIED AND PROVEN RIGHT

In the Chicago Motor Club's Reliability Run one stock car of this model entered and went through the three-day grind of 630 miles and finished in perfect condition with every seal intact and every part working as smoothly and steadily as at the start, thus proving itself from every practical standpoint

A PERFECT CAR

In this and the touring car of same chassis design is every modern feature of mechanical value, such as offset crank shaft, straight line drive, roller bearings throughout the transmitting mechanism and other features of equal value.

The price, \$2250, for either model, is made possible by the complete facilities and volume of output of the Rambler factory.

Why pay \$5000 for a car when we offer every dollar in actual value at less than half that price.

Let us show you; a demonstration will convince.

Thomas B. Jeffery & Company

Main Office and Factory, Kenoska, Wis.

CHICAGO

MILWAUKEE

Branches and Distributing Agencies BOSTON

PHILADELPHIA

SAN FRANCISCO

Representatives in all leading cities.

THANSPORTATION LINEARY

M34 V.17, no.14-V.18, no.13



Volume XVII.

New York, U. S. A., Thursday, January 2, 1908.

No. 14

SHOW MAY BLOOM IN THE SPRING

Metropolitan Automobile Dealers Didn't Know They Were to Hold One—But Details Have Been Arranged.

The "Metropolitan Automobile Dealers" will, or rather may, hold their "first annual spring show" in New York during the week April 6-11, 1908.

Apparently the dealers themselves are not aware of the fact, but a trifling circumstance of the sort is of small importance. For not only have the dates been fixed but the hall—the Metropolitan skating rink at Broadway and Firty-third street—apparhas been engaged, 23 spaces have been plotted and of course the price therefor has been fixed—only \$250 for the large spaces, \$200 for the smaller ones. Rules also have been adopted, that is, printed.

The "show prospectus," giving the fore-going details, made its appearance this week as quietly as a summer's sigh. It was the first that many of the metropolitan automobile dealers knew of the show in which they are supposed to be interested. According to the prospectus, C. Wood Tatham is general manager of the project, and Duncan Curry, the treasurer. Tatham was the manager of the show and "auto carnival" held in Atlantic City last summer, but who for some reason or other was displaced at almost the eleventh hour. He came to New York and mixed with the large colony of genial and enterprising spirits who have their nests in the Spalding building on West Forty-second street, in which so many "good things" have been hatched; he became so touchingly acquainted that some of them are not now so cordial in their expressions of regard as once was the case. Duncan Curry is automobile editor of Hearst's American and his "doubling up" with Tatham has caused some little surprise and comment.

That the promoters of the "first annual spring show" were somewhat in doubt as

to the dates for the affair is made evident by their prospectus, which was printed in blank and the dates filled in afterward in ink.

When inquiry was made of Alfred Reeves, general manager of the American Motor Car Manufacturers Association, he stated that he had heard whisperings that a "show" of the sort was in contemplation, but he was not aware that dates had been fixed or that a prospectus was in existence. His remarks conveyed the impression that he did not accept the project with too much seriousness

E. V. Stratton, manager of the New York Automobile Trade Association—the local dealers' organization—knew nothing whatever of the enterprise and naturally his association had not taken cognizance of it, nor did he think it would do so. For some time the association has had under consideration the holding of a "sales week" or "open house" early in the spring and Stratton did not think anything would be permitted to interfere with the carrying out of that idea.

Shelby Shifts Sales Department.

Henceforth the Shelby Steel Tube Co., as such, will to all practical purposes, cut little or no figure in the business, the Shelby sales repartment having been taken over by the National Tube Co., of which Clifton Wharton is the sales manager. The change, however, will be more apparent than real as the Shelby Steel Tube Co. is merely one of the units of the National Tube Co., and save in respect to the sales departments, the line of demarcation between them has been rather vague. Hereafter the business will be directed from New York, where Mr. Wharton is located, instead of from Pittsburg as heretofore.

Hutton with the Thomas Detroit.

W. H. H. Hutton, who for five years was purchasing agent of the Northern Motor Car Co., and who more recently managed their Port Huron factory, has engaged with the E. R. Thomas Detroit Co. He will be attached to the purchasing department.

BRITONS SCARED BY A BUGABOO

An Alleged American "Melon" Operates as a Bomb—Professions of Patriotism Punctured by the Explosion.

Great Britain is reveling in a trade sensation with what might be termed an American underpinning. While the underpinning appears to be rather weak it has given Britain's native sons in the automobile trade a grand opportunity to proclaim their love for the British public and the British workman, though their proposals for giving practical effect to their altruism differ so widely that a glorious row has been precipitated. It all comes about through the hair-trigger patriotism of that Harriman of the British motor trade, Harvey Du Cros, who stands as a repeller of the hated American products and who has made a denunciation of the importers who invited him to participate in a melon cutting based on the "American panic."

The first explosion was set off when Du Cros made public a letter written him by Shippey Brothers, a London wholesale importing firm making a specialty of American goods, and with it his grandiloquent reply. The Shippey letter recited that "many American motor car companies are on their beam ends through the financial crisis now raging in the United States," and that the "Official Liquidator" of the Pope Manufacturing Co. was prepared to sell "thousands and thousands of stock on hand at panic price." Not only had the Shippeys bought a number of cars at exceedingly low figures, the letter went on, but they had arranged for options on \$200,000 worth more which could be imported in time for the spring season if Du Cros wanted to help finance the scheme, The cars could be sold for 50 per cent. under the list, they said, and there was a "pot of money to be made." In conclusion. Shippey Brothers desired that Du Cros understand "that this proposal is

' Digitized by Google

made to you privately, knowing your power in the motor world; it may, therefore, answer your purpose to control it or crab it as you may desire."

Du Cros responded in the most lofty vein that while the offer was made to him privately, he declined "to be privy to any such transaction" and that he intended to give warning to the public and the British industry. His full reply was sent to the trade papers and dailies together with a copy of the original Shippey letter. After telling of his former alleged refusal to assist in a dumping of American bicycles in the English market, Du Cros, who declares he "has spent some of the best years of his life in developing the automobile industry," expresses his declination of the offer and hopes that "no Englishman will be found willing for the consideration of a 'pot of money' to join in such an attempt" as Shippey Brothers proposed "to dump American automobiles at ruinous prices to the detriment of the nascent English automobile trade."

Rounds of epistolary and editorial applause greeted Du Cros as a result of his letter thus spurning the horrid American offer in the manner of the Billy Baxter heroine who declares that "rags are royal raiment when worn for virtue's sake!" Here was one who set the welfare of the British industry above the opportunity for personal profit.

But Shippey Brothers were not to be thrust into the role of villains in the melodrama. When their "private" offer was made public with the scathing refusal, they affected to see in the latter less altruism than a desire on the part of Du Cros to discourage competition against his own enterprises of importing cars from Italy, France, Germany and Belgium into the English market. Further they were bursting with altruism themselves. This they set forth in a long letter explaining how their proposed importation of "panic" cars from America would benefit the English workman and the public. Their object in undertaking the enterprise, according to their letter, was as follows:

"(a) The employment of English chauffeurs to run these cars on our behalf;

'(b) To give English engineers repair work on all cars imported, as we have always done on the large number of American cars sold by us in this country;

"(c) To utilize British capital to profitable advantage in a safe paying business for all concerned;

"(d) And above all to check the flow of many systems of Continental cars to work which importers also import Continental labor to drive and repair them."

Manifestly whatever difference arose between Du Cros and themselves was due, apparently, to a competitive eagerness to be of benefit to the British trade. With the English propensity to ease themselves by the inditing of communications, everybody has taken a hand at spattering ink in the

discussion and the thing has run riot to a point where at last it has occurred to a few of the cooler heads to inquire whether there is any real basis for the turmoil and how far Shippey Brothers' tensely drawn representations of American conditions match the facts.

Going right to the heart of the matter, a letter signed by Percival D. Perry analyzes the Shippey proposition in part as follows:

"The new proposal emanates from a firm whose projections I venture to think should not be taken too seriously, and in confirmation of this view, I desire to query certain statements contained in a letter addressed to Harvey Du Cros, Esq., dated the 4th December and signed by Shippey Brothers.

"Therein it is stated, 'The --- company has failed for over four million sterling, and have thousands upon thousands of stock upon hand, which in the panic the Official Liquidator is prepared to sell at panic price.' Presumably the --- company is the Pope Manufacturing Co.; if this be so, then the figures stated in the said letter are quite inaccurate. Indeed, the above quoted paragraph is so loosely strung together that we are not told whether the thousands upon thousands of 'stock on hand' means thousands upon thousands of automobiles, or thousands upon thousands of dollars worth of automobiles, or thousands upon thousands of pounds sterling worth of automobiles.

"That there is a panic in the automobile business in America, I, having very carefully investigated the position, emphatically deny, but even if it were so, I fail to understand upon what authority Shippey Brothers can state 'the Official Liquidator is prepared to sell at panic price.'

"Can Shippey Brothers give the name of any company which is even in the hands of an 'Official Liquidator'?

"I think it would only be fair to the automobile industry if modesty or fear of advertising American automobiles had not compelled the numerous blanks throughout the letter of Shippey Brothers. Obviously, it is difficult to check and repudiate statements which are not precisely defined. I. however, have every reason to suspect the accuracy of the statement by Shippey Brothers that 'Our New York offices have purchased over £20,000 worth of cars, including fifty 35-40 horsepower touring cars . . which we can sell at the price of £350.' Inasmuch as later, in the same letter, it is stated that cars listed at £675 to £700, that is \$3,375 to \$3,500, will be sold at 40 per cent. to 50 per cent. under value, i. e., £350 to £420, and the British sellers make a 'pot of money.'

"Now the production of American automobiles listed at \$3,500 is strictly limited, and competition in the industry does not allow 50 per cent. profits, therefore the said cars, having to be sold at at least 60 per cent. off list, in order to provide the said

'pot of money,' could not be procured from bankrupt concerns.

"It is positively certain that there is, at the present moment, no bankrupt automobile concern in the U. S. A. which has on hand any number of finished cars such as Shippey Brothers threaten to dump into England.

"Most probably the communication of Shippey Brothers has obtained a good deal more publicity than was ever anticipated; however it is positively certain that there is no more danger of dumping by American automobile manufacturers than there is of dumping by French, German or other Continental automobile manufacturers."

If Shippey Brothers maintain an American office it is difficult to locate. None of the better known New York exporting firms are able to supply its address and extended inquiry has failed to reveal it. But their London letter indicates that they handle a number of well known American wares and the Motor World is in receipt of an invitation from them to "boom our ideas as much as you like," accompanied by a suggestion of "a slashing preliminary article." Like their letter to Mr. Du Cros, this communication is labeled "Private."

About thirty Pope-Toledos constituted the foundation for all the furore and flourish of trumpets. According to Albert L. Pope, of the Pope Mfg. Co., that number of those cars of the vintage of 1906 were on hand in November last, and to clear them, a special export price was set under option, which never was exercised. Since then, however, they nearly all have been disposed of on this side so that the quotations then given, having their possible English sale in view, have been cancelled. The officers of the company do not know of any arrangement for the export of Pope cars at "panic" prices, or anything suggestive of panic prices and are disposed to smile at the scare which the Shippeys threw into Mr. Du Cros and the British trade generally.

The Factory that Gauntt Bought.

The South Bend (Ind.) factory which N. C. Gauntt is to remove to Spokane, Wash., in the spring, proves to be the Perfection Automobile Co., which was first heard of at the Chicago show last month, where it exhibited one car. Gauntt, who is a Washingtonian, is authority for the statement that the Perfection plant employs 40 men and will need 100 when it locates in Spokane. Gauntt himself has designed a car with a convertible body that can be converted into a sleeping room, kitchen, etc., and for which he foresees a great future. He will style it the Flying Dutchman and expects to make 20 cars per month.

Thomas Adopts the Truffault-Hartford.

The E. R. Thomas Motor Co. finally have adopted the Truffault-Hartford shock absorber. It will be supplied as part of the regular equipment of all Thomas Flyers and six-cylinder cars.

The Week's Incorporations.

Boston, Mass.—Boston Taxicab Co., under Massachusetts laws, with \$1,000 capital. Corporators—Warren N. Akers, Norman J. Mac Gaffin, Lawrence B. Pinckney.

Colville, Wash.—Colville and Metaline Transportation Co., under Washington laws, with \$5,000 capital; to conduct automobile stage lines. Corporator—S. H. Anschell.

Lakewood, N. J.—Lakewood Garage & Machine Co., under New Jersey laws, with \$100,000 capital; to deal in automobiles and maintain garage. Corporators—Joseph B. Hoff, William H. Housen, and R. E. Todd, all of Lakewood.

Kansas City, Mo.—Kansas City Automobile Dealers, under Missouri laws, capital not stated; to conduct automobile shows, etc. Corporators—Philip C. Dodderage, president; Charles F. Ettwein, vice-president; E. P. Morairity, secretary.

Rochester, N. Y.—Murphy Electricity Rectifier Co., under New York laws, with \$1,000,000 capital; to manufacture electric charging apparatus. Corporators, Thomas J. Murphy, Walter B. Duffy, George W. Aldridge, Rochester; Richard Murphy, Amsterdam, N. Y.

New York City, N. Y.—Franco-American Taximeter Co., under New York laws, with \$500,000 capital. Corporators—Louis Hesse, 154 Elm street, Elizabeth, N. J.; John Kochendorfer, 166 Magnolia avenue, Richmond Hill, N. Y.; and John J. Gallagher, 701 Union avenue, New York City.

New York City, N. Y.—Motor Car Touring Association of the City of New York, The, under New York laws, to promote touring. Corporators—Stuyvesant Fish, Jr., Orme Wilson and Albert E. Gallatin, New York City; Marshall R. Kernochan, Pittsfield, Mass.; Percy Yyne, 2d, Princeton, N. J.

Rainier Removes to New Home.

The Rainier Motor Car Co. this week took possission of its new home on the corner of Fifty-sixth street and Broadway, New York. Although the place vacated was built especially for the Rainier company a few years ago, it has been so far outgrown that the business is now distributed through three different buildings. In the new five-story headquarters all this business of salesrooms, offices, garage and machine shop will be gathered under one roof and the facilities for the company's policy of keeping customer's cars in repair will be greatly improved.

Good Outlook for Trade in Canada.

J F. McLain, western sales representative for the Franklin company, reports that the most promising automobile field in the west this year is northwest Canada. Contracts twice as large as those of last year have been signed in the territories centering in Calgary and Victoria. The prospects

for automobile business in western Canada, according to Mr. McLain, are better than in the Seattle and Portland region in the United States, in spite of a duty of 35 per cent. A number of ranch owners in the Calgary-Edmonton district are now using motor cars for their work.

New and Compact Recharging System.

Back of the Murphy Electricity Rectifier Co., of Rochester, N. Y., which, capitalized at \$1,000,000, was late last week incorporated under New York laws, is said to be a recharging instrument or system, which is expected to practically revolutionize the cost and manner of recharging of electric vehicles of all sorts. The complete device, which is the invention of Thomas J. Murphy, is described as being "about the size of the ordinary typewriter and about a tenth of the size and about a twentieth of the weight of the apparatus usually employed to accomplish the same work." In addition to the inventor, the corporators of the company include Walter B. Duffy, a wealthy distiller of Rochester: George W. Aldridge, the up-State political boss and former State Superintendent of Public Works, and Richard Murphy, of Amsterdam, N. Y.

Hewitt Will Not Make Tires.

The Hewitt Rubber Co., which recently erected a large plant in Buffalo, and which was reported to be preparing to enter the tire business on an extensive scale, have abandoned all intentions of the sort. The Hewitt people admit that they made up and experimented with a number of automobile tires, but none will be marketed, as it has been decided to devote all efforts to the production of mechanical goods.

Hartford Changes Boston Location.

The Hartford Rubber Works Co. have removed their Boston business to larger premises in the Heard building, 817 Boylston street, which will be their only branch in Boston. They had been situated for six years in Atlantic avenue, and their reason for moving is to become more centrally located in the automobile district.

Studebaker Opens Two New Branches.

The Studebaker Automobile Co. have opened a branch salesroom in Cleveland for the sale of their electrics. It is located on Euclid avenue near Twentieth street, and Alvin H. Smith, formerly of the Central Automobile Co., is the manager. The Studebaker people are extablishing a branch in Boston also.

Wiedman Adjudged Bankrupt.

Henry C. Wiedman, of Detroit, who indorsed a large volume of the Detroit Auto Vehicle Co.'s paper and "went broke" soon after its enbarrassment, has been adjudicated bankrupt. The first meeting of his creditors has been called for Saturday, 7th inst.

In the Retail World.

George R. Tennant has been appointed receiver for the Northwest Motor Co., Seattle, Wash. The assets and liabilities are not stated.

The Kings County Automobile Co., Brooklyn, N. Y., has assigned. The company did a general garage business and handled the Glide car.

The Whitten-Gilmore Co., which will handle the Thomas line in Boston, opened its new salesrooms last week. The company is located in comfortable quarters at 907 Boyleston street.

Henry B. Hughes is preparing plans for a two-story brick garage to be erected on the south side of Tioga street, west of Sixteenth, Philadelphia. The building will measure 50x100 feet and will cost \$10,000.

William Turnbull has just completed what is claimed to be the largest garage in Peroria, Ill. It is located at 225 South Madison avenue, measures 54x171 feet, and has storage capacity for upwards of 75 cars.

William Klockau, a wagon repairer of Rock Island, Ill., is preparing to "go into automobiles." He is building a two-story brick garage adjoining his present establishment and besides engaging in repair work will sell the Ford. The building will measure 37x40 feet, and its cost will be \$5,000.

Craig-Toledo Trustee Sues Craig.

Joseph W. Lane, as trustee of the Craig-Toledo Motor Car Co., Toledo, Ohio, has instituted a suit for \$18,000 against George L. Craig, vice-president of the company, in United States district court.

The trustee seeks to recover the difference between \$2,000 held to be a fair settlement to a creditor and \$20,000 allowed Craig in the form of eight Craig-Toledo automobiles at the time the company went into bankruptcy last June. The suit is based on the charge that Craig received a preference over other creditors of the defunct company.

Hathaway is Trustee for Dolson.

C. Roy Hathaway, of Muncie, Ind., has been appointed trustee in bankruptcy by the creditors of the Dolson Automobile Co., Charlotte, Mich. Mr. Hathaway furnished \$25,000 bond and entered upon his duties at once.

New Maxwell Factory Soon to Start.

It is expected that the new Maxwell-Briscoe factory in Newcastle, Ind., will begin operations on January 15th. It is stated that orders have been given for the employment of 600 men.

Franklin's New Boston Manager.

H. G. Kilbourne has been appointed manager of the Franklin branch in Boston. Kilbourne is a mechanical engineer and has had long and varied experience as a salesman.



21½ Per Cent

M
I
D
G

E

of all cars shown at the Madison Square Garden Show were equipped

with

Midgley Universal Rims

and .

38 Per Cent

of all detachable rims on cars in this Show were

Midgley Universal Rims

At the Philadelphia Show, one-fifth of all cars were equipped with the Midgley Universal Rim—61% more than its nearest competitor.

M I D G L E

The Midgley Mannfacturing Co., Columbus o R i o

THE MOTOR WORLD



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, Pres. R. G. Betts, Treas. F. W. Roche, Sec.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

AT Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JANUARY 2, 1908

High Time for a Showdown.

It is known that Mr. Thomas Francis Moore possesses a map of the course over which at least he and Mr. Robert Lee Morrell propose to run a stock car race in April next. It is understood that permission to use the roads for the purpose has been obtained and last week the American Automobile Association issued a sanction for the race, not to any club or association, but to Mr. Morrell personally as "chairman" of an intangible something.

Meanwhile, either Mr. Moore or Mr. Morrell, or some of their helpers, are crying out that someone is seeking to undo their work or to render it more difficult, whatever that may mean. But before their cries can be heeded, it should occur to the men concerned that before full faith can be placed in either themselves or their project, they must, to employ expressive vernacular, "play on the level" and show their hands.

When this stock car road race first was exploited the so-called Metropolitan Automobile Association was its sponsor and service for sweet charity was its ostensible purpose. When the Motor World smoked out this so-called organization it was found to consist chiefly of Mr. Moore, whose vocation is that of press agent. Soon thereafter, the latter acquired Mr. Morrell as his "chairman" and since that time no more has been heard of his "association." But it is common report that the "chairman" has been paying the press agent a salary while he has been operating as the "Automobile Manufacturers Committee," which appears to have become sponsor for the race and which is to turn over any "surplus receipts" for "the benefit of the of Westchester taxpayers County." Throughout the whole mysterious proceedings, one feature has remained unchangedthe size of the entry fee. It still stands at \$1,000.

There has been too much mystery connected with the whole movement; and where there is mystery suspicion is justified. The Motor World holds no disrespect for either Mr. Moore or Mr. Morrell and it is not opposed to a road race for stock cars under proper auspices. It may or may not prove of benefit to the industry. But when it is sought to extract \$1,000 from each of those who would compete, and when a race of the sort on the public roads entails so many possibilities of grave legal complication and responsibility to all concerned with it, it is absolutely essential that the responsibility be fixed well in advance and be fixed clearly and on something tangible. "Robert Lee Morrell, Chairman," despite the fact that Mr. Morrell may be possessed of means, is suggestively indefinite. Of what is he chairman and why? Why his almost incomprehensible payment of a press agent's salary? Why the sudden snuffing of the "Metropolitan Automobile Association"? Why the equally sudden creation of the "Automobile Manufacturers Committee" and the substitution of taxpavers for sweet charity? Who comprise the "Automobile Manufacturers Committee" and who appointed them, and when, where, how and why? What is behind all the twistings and turnings and mysterious gumshoe

If this proposed race for stock cars is not a plain game of graft, why is it not possible to play openly and above board? We do not say that it is a game of graft but if there is nothing in the allegement that the race is merely a play for fat pickings by a party of four or five men, to which as many newspaper workers will be party, why is it necessary to shuffle the cards under the table?

It does not seem possible that any man with a realizing sense of responsibility who desires an event in every way worthy of and industry and who also desires to avoid entangling complications is likely to pay \$1,000 into a treasury that seems to have no bottom and which is obscured by so much fog. It is high time for a showdown.

About Converted Pleasure Cars.

As might have been expected sooner or later, free rein is being given to the suggestion that the interests of the commercial vehicle industry may be served to good advantage by converting second-hand pleasure cars into business vehicles by the adaption of a suitable body. Furthermore, the impression is conveyed that this may be done profitably by any one who is desirous of testing the economy of the motor vehicle for business purposes at considerably less expense than would be the case were the original investment to be made for machines constructed especially for the work. Nor does it appear at first sight that such a transformation would be in any way misleading to the investigator, or unprofitable from the ton-mile point of view,

Further reflection, however, develops the point that the car made to carry an eight hundred pound load of human freight at a forty-mile gait over the high road will not necessarily prove as satisfactory when called upon to carry a thousand pounds of merchandise at fifteen miles an hour over cobble stones. Even at its best, the pleasure car is given over about equally so far as its bulk is concerned, to machinery and passenger accomodation. Lengthening the wheel base and strengthening the frame may increase the floor space available for the load, but the sensitive, high speed engine of the touring car will demand extra cooling facilities as well as lower gearing when put to the sober task of commercial use. But here is a suggestion of changes other than the mere construction of a new body, while for absolutely satisfactory service the removal of the driver's position from that behind to one above the motor would be of advantage, in addition to which different tire and wheel sizes, stronger

springs, and new methods of attaching the body to the frame also would be required to gain the full value of the power available in the motor.

In the second-hand phase of the suggestion is seen perhaps a greater menace to the commercial vehicle than any which has yet been voiced. The questionable properties of the average used car as offered for sale at the average car broker's establishment are well known. Adding these to the uncertainties of the average carriage builder's treatment of the machine, and then putting the relic into the hands of an owner whose only desire is to test the motor vehicle as cheaply as possiblenot to test it to best advantage—and the result is at once apparent. Save where the transformation is made at the hands of motor engineers and the trial service performed under really competent management, such an experiment must almost ininevitably result in dismal failure.

Nothing in this may be construed into a disparagement of the pleasure vehicle as a fit subject for conversion to any other use. Such a transformation is not only possible, but may be done profitably under proper circumstances. Just as it is possible to assemble a car successfully from components which may be bought in the open market, so it is possible to use the parts of any car in constructing another, or to alter any car to suit a different purpose from that for which it was originally intended. There can be no question that there would be a legitimate and useful field of endeavor in the conversion of machines in this way, were there sufficient demand to warrant it. But to throw open the door to unscrupulous and syster dealers to unload their battered, surplus touring stock as economical commercial experiments, just at a time when the commercial vehicle movement is beginning to show signs of healthy animation, is to throttle the market for new machines, and invite discouragement on the part of the user, rather than to stimulate both, as is the apparent intention.

Tire Chains and the Highways.

In connection with the recent strictures on the use of tire chains on the roadways of New York's park system there follows the suggestion that whatever progress is being made in methods of highway construction the ideal is still a long way off. Theoretically the road should be made to

accommodate the vehicle—not the vehicle to accommodate the road. And whatever limitations are considered ought to be such as restrict the use of materials and methods which react away from the ideal road. Instead, roads which are capable of withstanding the heavy loads of commercial traffic are usually too rough for pleasure vehicles to traverse at even moderate rates of speed, as speed is rated at the present time, while the smooth and beautiful courses of boulevards and parks are wholly unsuited for the stress of laden vehicles.

Reduced to its lowest terms, the construction of the model highway comprehends but two elements, that is to say the construction of a foundation of sufficient strength to stand the wear and tear of maximum wheel pressure and abrasion, and a method of protecting that foundation with a covering which will be at once elastic and waterproof. Simple as these requirements are, however, they yet remain to be satisfactorily fulfilled. From the days of Roman road builders down to the present, while the ideal has been growing clearer and clearer as a vision, the reality has been approached with painful slowness. Even the best roads of the boasted system of Continental Europe require an amount of attention and upkeep which would spell their ruin were it not for the excellent systems in vogue and the cheapness of the labor available for working them. Furthermore, it will be a long time even yet before the manual of highway construction is completed, judging by present indications.

The Excitement of England.

It is unfortunate that in conveying an invitation to "follow our ideas," after having indulged in a "slashing preliminary article," the Messrs. Shippey, of London, should mark their communication to the Motor World "Private." Its publication would add to the interest of the exciting situation which they precipitated in England by privately offering for sale a few 1906 American cars of which they really were not possessed, which private offer was so publicly and indignantly scorned by that valorous protector of the British faith, Mr. Harvey Du Cros.

It may be that Messrs. Shippey are sincere in their belief that they are serving the interests of the American industry by picturing it as being on its "beam's ends" or tottering on the verge of bankruptcy or the brink of panic, but if so, their beliefs

COMING EVENTS

January 14-18, Hartford, Conn.—Hartford Automobile Dealers' Association show in Foot Guard Armory Hall.

February 1-8, Providence, R. I.—Show in Providence State armory.

February 10-15, Detroit, Mich.—Tri-State Automobile and Sporting Goods Association's annual show in Light Guard armory.

are sadly in need of renovation. We are sure, therefore, that they will pardon us for declining their invitation and refusing to follow their ideas. If they know anything at all about the American industry-and they should know something-they are well aware that if anything it is in better condition than the trade of either Great Britain or Continental Europe; it certainly is not in worse shape. It is very evident that in their haste to grasp "a pot of money" without risking a cent, they simply exaggerated wildly and slopped over so badly as to bring up "between the devil and deep blue sea." They were as unfortunate in their choice of men as in their choice of words and methods and have done no good for themselves or for any one else.

As for the shrewd, cold eyed Du Chos, who so courageously saved Great Britain from the "ruination" that might be caused by the "dumping" of 30 or 40 good, if bargain priced, American automobiles—well, there are those of us in America who remember Du Cros when he first began making his millions to which this country contributed at least a small pot. It is quite characteristic that he should wave away the American invasion with his left arm while opening the trap door for the Frenchman, the German and the Italian with his good right hand. That is one of the attributes of true generalship and financial genius.

If the British public has escaped paying 1906 prices for 1905 Continental-made cars or 1907 prices for the 1906 product, it may count itself more fortunate than the guileless Americans and it may therefore have real cause to thank Mr. Du Cros. We became rather used to that sort of "dumping" and at no time did we become half so excited as our British cousins. Perhaps it was because no Shippeys wrote letters to us, or because we had no Du Cros to spurn the cruel offers to "crab" or "control" a "pot of money," and to prove himself his own best press agent. Our British friends should calm themselves.

THE MOTOR WORLD

AMERICAN BODIES THE FEATURE

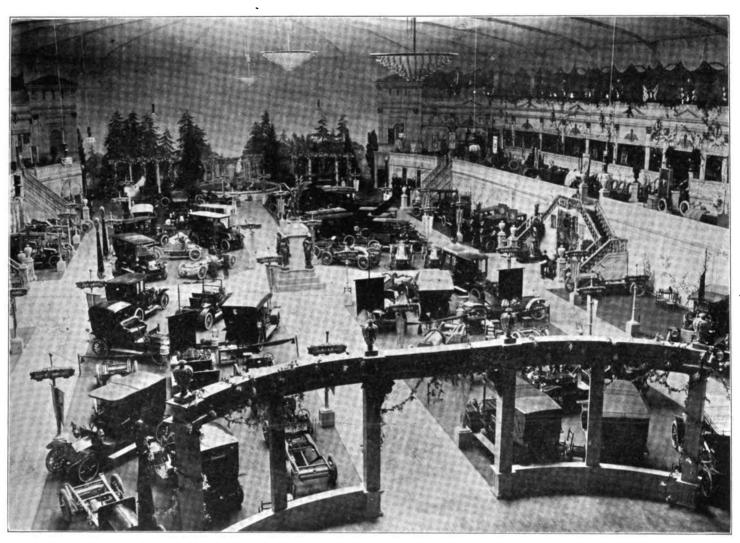
Importers' Salon the Most Beautiful Show
Thus Far Held—Slim Attendance
Despite Its Attractiveness.

The Importers' Salon in Madison Square Garden, New York, opened on Saturday evening last, 28th ult.; it is still open. It is worth going to see, for it is, regardless of what it contains, the handsomest autothe Garden has broken all previous Salon records, there never has been a day when the counting of the gate receipts has entailed overtime work or extra help. The previous record was established by the "Salon" held on the top floor of Macy's dry goods store, when as many as 50 persons were in attendance at one time. During the past several days, there have been several occasions when fully 500 people were present in the Garden. The average evening attendance probably has been between.

press agent report, paid \$450 for the privilege.

The parade was largely a "frost" and if the attendance throughout the week also has been attenuated, it has in no way militated against the beauty of the show.

The decorative scheme comprehends the reduction of the huge Garden to a simple oval arena which, with the aid of the drop curtain at the eastern end is transformed into a graceful court of honor with intersecting central aisles, elevated platforms



GENERAL VIEW OF THE IMPORTERS' SALON IN MADISON SQUARE GARDEN

mobile show ever held in this country. The promoters heralded it as the "Paris Show transported to America," which, of course, it is not. It would not much more than fill a corner of the Paris building and lacks the magnificent signs and electrical displays and other glittering trappings. But the New York show required no such exaggeration, and it is an open question if it does not teach Paris itself a lesson. It presents a beautiful picture—harmonious, restful, pleasing. Purely as a spectacle it is well worth the price of admission.

It may be seen, too, without any of the elbowing or jostling which sightseers suffered at the American shows. For while attendance at the function now occupying

300 and 400; during the forenoons, the place has resembled a deserted village. The New York public absolutely has refused to "warm up." Even on New Year's eve, when what one mean person described as a "midnight monkey parade" was held, and when the streets were literally packed with jubilating humanity, the attendance was slender. It was hoped that the parade would draw from the crowd, but it failed utterly to do so. Scarcely 300 people witnessed it. It was supposed to represent the "Evolution of Locomotion" and was led by a monkey or rather a man in monkey garb. The man's identity was not disclosed. The tail end of the parade was an Italian automobile, the agent of which, according to

at either side and a peristyle directly in front of the drop partially surrounding a circular fountain of classical nude female design upon which colored lights are made to play from the balconies above. The presence of real evergreen trees about the fountain blending with the picture on the curtain gives an effect of distance which is at once harmonious and pleasing.

The ceiling and floor coverings are of soft light green tone, the aisle floorings being brown. The balcony fronts and walls are in imitation marble, ornamented here and there with gay bannerets and placques, and the lights are so disposed as to give an even illumination without glare. Each of the exhibits is signalized by a white post

THE MOTOR WORLD

at either corner, bearing a blue transparency giving the name of the car exhibited in white letters, while below are hung banners giving the exhibitor's name in golden letters on a blue silk background. The bases of these posts are illuminated from the back, shedding a foot-light glow on the stands. The accessory exhibitors are all placed on the elevated platforms at the sides, the decorations being in keeping with those

Among the interesting features observable in the foreign built bodies, may be mentioned the disappearing seats seen in the Rothschild bodies which fold down forward and lie concealed back of the front seat when not in use, even their iron supports being hidden in grooves in the floor under the carpet. A hooded Victoria body with enormously high backed rear seat and flat canopy reaching from the top over the

seat and no over the a to it. Hid st. Seat and seat and it. Seat and seat and it. Hid seat and seat an

CONTINENTAL TIRE EXHIBIT

on the floor, while over all, from the western end a framed painting of three undressed and winged ladies in some sort of ecstacy, peeps down over the huge blue flaming legend, "4th Importers'."

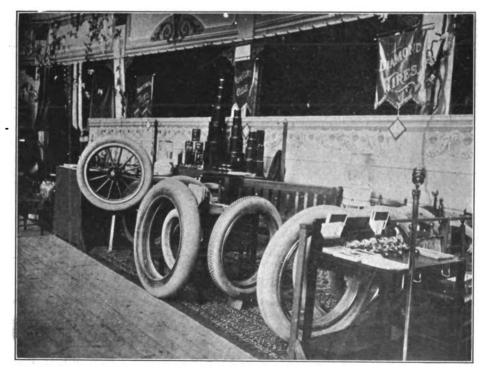
There is no crowding of cars or of visitors, no gaudy color effects, nothing to jar or disturb the sensibilities. From the little bowers back of the platforms on either side, where are easy chairs, and tables, to the concert hall, which is given over entirely to a grass plot with gravel walks running through it and a loan exhibition of pen and ink drawings, it gives ever more the effect of a show picture than of a real show.

There are 94 vehicles grouped about the stands on the main floor, of which 25 are shown in chassis only, the closed type of body being most conspicuous among the body shapes. Whatever the value of the show in other respects, the beauty and finish of the bodies is of unquestionable superiority and shown to better purpose than ever before on a similar occasion. In fact, if the show is possessed of any particular marked or significant feature it is the display of American bodies of foreign cars.

About half of the bodies on view are of domestic manufacture. That they compare favorably with the imported constructions merely supports the often repeated contention that the American carriage maker has no equal in any other country. As a matter of fact, of the whole number of 77 bodies shown mounted and dismounted, exactly 38 are home production.

construction of the new shaft-driven Panhard, with its progressive type change gear in which the shortening of the case brought about by the use of two sliding gearsets has made possible the use of a master clutch enclosed in the same case with the gears, and also a novel system of brake equalization. The final driving system of the new F. I. A. T. made-for-America cars has a particularly substantial appearance owing to the use of the massive torque tube and its hinged mounting in the frame. The Hotchkiss gearset, in which the reverse idler is swung into mesh from above instead of below the lay shaft, offers a suggestive arrangement for investigation, as does the Renault method of operating the selective gearsets by means of a face cam. Perhaps the most unusual vehicle in many respects is the new light model C. G. V., which has the driver's seat on the left, with the brake and gear changing levers in the center of the foot board.

The cars exhibited are as follows: Bayard-Clement, Renz, Bianchi, C. G. V., Delahaye, Delaunay-Belleville, Dietrich, F. I. A. T., Hotchkiss, Isatto-Fraschini, Maja, Panl ard-Lavasseur, Pilain, Rencult, Rochet-Schneider, Rolls-Royce and Zust. In addition, Messrs. Brewster, Quinby and Rothschild also occupy spaces on the main floor.



DIAMOND TIRE EXHIBIT

driver's seat to the wind shield, is shown to good advantage on an Isotta chassis. Another novelty is the five-seated touring body on the Maja car, which has an individual removable seat in the center of the tonneau instead of two, and divided rear seats of the bucket type.

As for the mechanical details which may be noted as of passing interest, there is the The accessories division is represented by some thirty-six exhibitors, among the more prominent of which are the Diamond Rubber Co., Hartford Rubber Works Co., Continental Caoutchouc Co., Warner Instrument Co., Hartford Suspension Co., Dow Tire Co., Charles E. Miller, C. F. Splitdorf, Lavalette & Co., Michelin Tire Co., Robert Bosch, Inc., and Levi Rubay.



THE MOJOR WORLD

PHILADELPHIA'S MODEL GARAGE

Opened with a Society Function—Its Equipment Complete for Business, with

Provision for Recreation.

Broad street, in Philadelphia, has acquired a garage de luxe which in its accomodations for the chauffeur and in its beauty of decoration and finish sets a highwater mark. The opening of the new building was made a "society event," at which time the evening clothes contingent were given an opportunity to inspect it. The garage is under the proud proprietorship of the Keystone Motor Car Co., the Quaker City

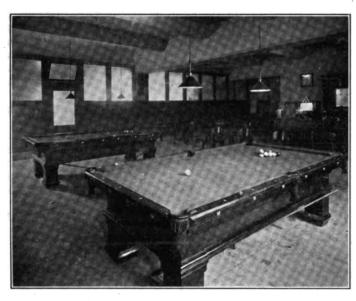
tainment has been very complete. In addition to steel lockers for about 100 men, there are several shower baths, and a smoking room with two billiard tables, chairs, and a lunch counter where light lunch and cigars may be obtained.

The third floor is a single room using the full width and length of the building, 53 by 200 feet. The room is without a pillar, and is used for the storage of cars. The top floor, in addition to a very completely equipped machine and repair shop, has a large stock room where everything is classified and stored in accordance with a catalogue. From the basement to the top floor runs an elevator big enough to take any car, and on the third and fourth floors are steel turntables adjacent to the elevator

ABOUT ACETYLENE GAS CYLINDERS

Engineer Bowmanville Explains Some Causes of Explosion—Faulty Construction One of the Most Frequent.

"In the Motor World of December 25th, I came across the item headed "Prest-O-Lite again visited by fire." As I am the man who introduced that system in the United States, and who sold the patent to the Commercial Acetylene Co., 80 Broadway, New York City, of which company I was for four years the chief engineer, I cannot refrain from saying a word about the use of acetylene gas compressed in acetone



WHERE RECREATION IS ENJOYED



WHERE LABOR IS PERFORMED

agents for the Packard, and is located at 216-218-220 North Broad.

The building is of four stories and has high ceilings and broad expanses of window space to give plenty of light. The Broad street entrance to the show room is elaborate to a degree suggesting the entrosal of a fashionable hotel. The cement floor is strewn with rare Persian rugs and the desks of the salesmen and the other articles of furniture are in the subdued but rich Mission style. Show cases of supplies and accessories are also finished in the same style. Back of the show room is a garage room, separated by sliding doors, all cars entering from the street at the rear of the building.

A broad stairway rises to the mezzanine floor, which in front has a balcony overlooking the show room and in the back a similar balcony over the garage room. On this floor there is a ladies' reception and retiring room, and the private offices of the president and general manager and the general offices for the clerical force are also located here. The back part of the second story is given over to the chauffeurs, and as shown in the accompanying illustration, the provision for their comfort and enter-

shaft, which is rather a new feature in garage construction. Altogether the building is in many respects a model combination of ornateness with practical and utilitarian virtues.



PHILADELPHIA'S GARAGE DE LUXE

and porous material, for the purpose of automobile lighting; writes Eugene Bowmanville, of Jersey City, N. J.

"If the gas cylinder, used on automobiles, was manufactured, by carefully following the patent and method of the Commercial Acetylene Co., explosion of gas tanks would be impossible. Personally, in several instances, for the purpose of demonstration, I have roasted fully charged cylinders of the Commercial Acetylene Co., leaving them in the fire until the fittings and safety device were partly melted, thus allowing the gas to escape, without producing any explosion; railroad cars, boats, etc., equipped with cylinder, properly made, have been destroyed by fire, but the cylinder was recovered intact, after the fire, except that the fitting and connection was partly melted but no explosion occurred. Accordingly, the cause of automobile cylinders exploding is from defective construction or other cause which may be one of the following:

"I notice that all makes of automobile gas tanks, with one exception, have brass and copper valves, and fittings. That the pressure gauge has its spring tube made of copper or brass, and the most strange and ridiculous of all is, that some gas tanks



have their safety device made of brass and copper, when it is well known that those two metals are a source of danger through the formation of acetilite of copper, when in contact with acetylene gas. At a pressure above 2 atmospheres, acetilite of copper may cause the cylinder to explode, when the temperature of the cylinder is above 90 degrees.

"Furthermore, the purpose of the porous material is to isolate the gas in the small cells so as to prevent the propagation of the explosive wave, through the whole cylinder, for that reason the size of the porous cell must not be larger than 1-60 of an inch, while most of the gas tanks on automobiles have been filled with loose asbestos fibre and introduced into the tank through spud opening without a binding material of any kind, to prevent the asbestos fibre from settling by the vibration of the car, which materially will leave an empty chamber in the cylinder, consequently rendering useless the balance of the porous material. With that state of affairs, explosion must happen for one reason or the other. Then, if a gas tank explodes amongst other defective ones, they will all go off, one after the other, from the effect of the concussion, while if gas tanks are properly made, explosion or fire will not affect them."

Test for Weak Valve Springs.

It sometimes happens that a motor which has lost its liveliness of action will be found on examination to be suffering from weak valve springs. Invariably this prevents proper closing and to some extent interferes with the timing of the motor. A good test for this complaint is to insert the end of a screwdriver blade between the convolutions of the spring and twist it slightly so as to increase the tension. If an improvement in the running is visible at once it may be taken for granted that the difficulty is resident in the valves and in the particular valve under examination. Similarly a test for too strong a spring is merely to press lightly toward its fixed seat with the screwdriver blade, paying careful attention to the effect on the action of the motor.

The apparent requirement of a stronger spring, however, should not invariably be taken as proof positive that one is required. In case the valve stem happens to be bent out of line, or is too tight a fit for its guide, the sluggish action which this develops may result in a loss of activity on the part of the motor which the increased strength of the spring will apparently cure. Hence when replacing or strengthening a spring which seems to be over weak for its work, care should be taken to see that the stem runs smoothly and straight in its guide.

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

THE MOTOR WORLD

ELECTRICAL BRAKE FOR TESTING

Principle of a New Device for Measuring
Horsepower—Its Practical Effect and
Formula of Readings.

In the effort to devise more accurate and satisfactory methods of testing actual horsepower of automobile motors various ingenious systems have been evolved to supplant the ordinary brake test mechanism. Electrical systems came early in this development and there are at the present time 'a number of testing outfits in use in American automobile factories which depend upon electrical generation and absorption. In a few instances hydraulic testing devices have been devised, giving a high degree of accurate service, but that the field for ingenuity in this direction is still very wide and inviting is indicated by the new devices of this character that are from time to time brought out.

Of these one of the latest is the product of Messrs. Morris and Lister, electrical engineers in Coventry, and by reason of the fact that it differs materially from the systems so far shown, it is entitled to comment. While it is electrical in a sense, it differs from the usual electrical testers in that the motor under test is not called upon to generate current, but to overcome the magnetic resistance primarily set up by current from ordinary sources. A ring structure containing a number of electromagnets around its faces is mounted on a central shaft on which it may turn like a wheel on its axle, except that its rotation is limited to a small arc. Coupled directly to the crank shait of the motor under test are two copper discs, which rotate on the same axis as the floating magnet frame just described and which have their faces close to the poles of the magnets. When electrical current is sent through the windings of the electro-magnets, what are known as "Foucault currents" or "eddy currents" are generated, creating a resistance to the turning of the discs when the magnetic floating portion cannot revolve also. A weight beam extends at one side of the floating portion to prevent its rotating with the discs because of their electrical or magnetic unity and the degree of pull which the discs exercise on the floating portion is measurable by means of the weights hung on the beam and their distance from the fulcrim.

By regulating the amount of current in the magnets and putting the weights at the points where they balance the drag of the discs the reading at any motor speed may be taken. Increasing the current to the magnets and putting extremely heavy weights on the beam can be done to a point where the motor under test will be stalled because of the resistance to the rotation of the discs.

In practical effect it is like a prony brake, except that it quite does away with the troubles incident to disposing of the heat of friction and to the inaccuracies resulting from constantly varying frictional resistance. The work performed is ultimately dissipated as radient heat from the discs, the eddy currents set up in them resulting in their increase in temperature. The discs are fitted with fan blades which help dispose of the heat as they revolve. It is a simple substitution of magnetic drag for friction and the switchboard permits of a very fine degree of regulation of the pull. The power is weighed just as it is in with the prony brake, and while electricity is employed, there is no complication of expensive generating mechinery and resistance sets. The particular advantage of the system lies in the possibility of applying the load to the motor under test evenly and without shock, as well as that once the current has been adjusted the load is unvarying and may be maintained indefinitely without danger of overheating the brake

The formula used for the readings is one in which the brake horsepower equals 2 times 3.1416 times the distance of the weight from the center of the shaft in feet, times the weight in pounds, times the revolutions of the copper discs per minute, the whole product divided by the constant 33,000, giving the direct figure. The machines as at present made are suitable for from 3 to 35 horsepower, and will take 1,500 r.p.m. on a small engine down to 750 r.p.m. for a larger size.

Security Needed for Hub Caps.

With the ordinary double chain drive, or with the old-fashioned type of live axle, no particular difficulty was attached to the loss of one of the rear hub caps, other than that opportunity was afforded for dust and dirt to work their way into the bearings. With the modern system of clutch driven rear wheels, however, the loss of the cap frequently involves the possibility of working out the driving shaft thus freeing the wheel of its drive and turning adrift one side of the differential. On this account it is somewhat to be wondered at that makers do not take more pains to secure the hub caps in place by some locking device, especially as far as the rear wheels are concerned, thus safeguarding a transmission system which otherwise has few faults.

Care in Removing the Magneto.

Magneto mountings frequently are so arranged that the entire device may be removed from the car by simply loosening one or two screws. The operator should invariably take pains to see that the driving gear is plainly marked to indicate the proper method of reassembling, however, before taking out the magneto, as otherwise it may be practically impossible to get it back without going over the timing in exact detail.

BROKERAGE IN SECOND-HAND CARS

Methods of Operation That May Eliminate the Second Hand Dealer—Bringing Principals Together.

When a prospective purchaser of a motor car starts in to price new machines and finds that the cost of well-recommended makes is high, and then notices newspaper advertisements, offering "slightly used" second-hand cars for sale at remarkably reduced prices, he is set thinking. The expectant owner may not be in a position to afford the price of a new car of a certain make that he would like, and at the same time, may hear of a second-hand machine of the same model, which has been in commission for a few months and can be had at a cost that would come within his reach.

The question that confronts him is: will it be worth while to buy this used car? Would it not be better to pay the same amount for a new machine, listing at a lower figure? Will this car that has been in commission for a period of some months last as long as a new car of cheaper design, to be had for the same price as is wanted for the used model?

This is what a person has to consider carefully before he signs the check and as a motorist friend remarked to me recently, the choice of a car is like the choice of a wife. You never can tell. Of course, the wiseacre who thinks he knows it all, but in reality has had no experience with cars, will tell you that a man is a fool to buy a second-hand automobile and that he will regret it sooner or later. However, having been associated with many people connected with the motor car industry, as well as members of automobile clubs and numerous motorists generally and having been a motorist myself, I have learned from good sources that there is another side of the question. I have learned that in many cases a man will strike a profitable bargain in a second-hand machine. The essential thing for a prospective purchaser to know, is when to buy and when not to buy a car that has been used.

Ignoring for the present, the case of intimate friends selling a car to one another, when the deal is more or less personal, I will venture a few remarks on what my experience among persons who have had transactions with concerns dealing exclusively in used automobiles, has been. Personally, I have nothing against those engaged in the second-hand car business, but I have learned from numerous customers of these, that in many cases, in fact in the majority, dissatisfaction has resulted on the part of the purchaser. The reason for this is simple. A man has a 1906 car that cost originally \$3,000 or \$4,000, and has stood some rough useage and has been driven may be 10,000 miles. It may have no real

mechanical defects, but at the same time needs priming up, new tires, batteries and other parts, and sooner than go to this expense, the owner prefers to sell it and buy a new machine. He may wish to make a European tour and purchase a foreign car while abroad. So he offers his car for sale to a dealer in "hand-me-downs" and the latter tells the owner that he is willing to give four or five hundred dollars cash for the car, as it stands. The car probably has this much worth of accessories and improvements on it and naturally, if the owner thinks his toy is worth anything at all, he will refuse to sell it at such a low figure. On the other hand, he may consider that the machine has seen its best days and is about to fall apart and so he takes the \$500 cash, which just about pays his wife's millinery bill and buys him a pack of cigarettes.

The second-hand dealer then puts a man at work on the car to "touch it up" and put some varnish on it and squirt some oil in the engine base to try to ease up some of the "knock" in the cylinders, and he may have the poor little worn out valves reground, so that there may be a little compression in the lungs. Then a buyer is influenced to take it home to his wife for only \$2,000. This is the buyer who gets "stuck." It happens almost daily.

Purchasing under the above conditions (which may not be known to the buyer who has been deceived and lied to), is a very poor proposition. Now here is another method, which I have known to give satisfaction to the buyer in many cases. My opinion is entirely unbiased, as I am in no way connected with any retailing concern.

There is, in a building on Thirty-fourth street, New York City, a man well known in automobile clubs and among motorists and the trade generally, who is noted for an amusing little joke he plays on people. One morning some months ago, he advertised a second-hand car for sale, in a daily paper. About 10 a. m. a man called at his place of business in response to the ad. The caller was somewhat surprised at finding the gentleman in a small office on the ninth floor, and asked:

"Where is that car you have for sale?"

"Here it is," replied the advertiser blandly, "right here."

With that, he removed a toy automobile from a desk drawer, wound it up and rolled it across the floor.

"Don't you think she runs smoothly?" he inquired.

The man with the small car was not a lunatic, as his caller may have imagined at first. He is repeating the same trick nearly every day for other callers, for this person is an automobile broker, doing a legitimate brokerage business in second-hand cars, for clients who wish to buy or sell the same. Here is where his business differs from the ordinary second-hand dealers. He acts much the same as a real estate or insurance broker, merely putting the buyer

in touch with the seller, the broker not attempting to handle the car for sale or have it on his hands at any time during the transaction.

For instance, Mr. Jones desires to pay a fair price for a fifty horsepower 1906 high grade car, that has been carefully used, one that is in perfect order and not requiring any repairs. He cannot find what he wants off-hand and has not the time to spend in searching for a car that will suit him. He goes to an automobile broker and states his wish, paying no fee whatever and it is understood that he will not pay the broker a fee at any time in the future either, (for a broker making any charge to a buyer-client, is not legitimate). Now the broker knows of a Mr. Smith on his list, who has just such a car as Mr. Jones wishes to buy. The amount that Mr. Smith wants, is about what Mr. Jones is willing to pay. Satisfying himself that his clients are both responsible parties, the broker arranges an appointment so that Mr. Smith may give the prospective customer a demonstration. The dicker for the sale of the car is made between Messrs. Smith and Jones, the broker not entering into the case at all. The whole business is done openly. When the transaction takes place, the broker receives a commission of from 5 to 10 per cent. from the person selling the car.

To my mind, this is a fair, legitimate commission for his services, in bringing the two parties together, it being remembered that the broker advertises the car for sale in daily papers, until the right purchaser is found, assuming all the expense and risk in such cases. Thus by going to a broker, a purchaser of a second-hand car, is put in touch with the right person, free of all costs, and he is reasonably sure of getting a car that has merely been in private use and not an old broken down "tub" that has been banged around by garage employes and used for business more or less, and then rebuilt several times and painted. The transaction becomes about equivalent to the case of a man selling his car to a personal friend, although often more satisfactory than a "friendly deal." If the broker consulted is what he should be, he will only do business with responsible private persons and not with dealers in second-hand cars. If a broker tries to send you to a dealer, don't listen to him. A good broker will not attempt to sell a car for a client, which he knows to be defective in any way.

There is absolutely no good reason why a man should not purchase certain machines that have been in use for a short time, when the price asked is reasonable. A car that has been used for a few days by an owner, becomes a "second-hand" affair and depreciates at least 20 per cent. in value, although it may be in perfect condition. Indeed, it is a well known fact that a car often runs better after having been run six or eight hundred miles, than it ran the day it left the factory. Any one of a num-

ber of reasons may be the cause of a man desiring to sell a car when it is in perfect condition. One very common reason, is that an owner wants a higher-powered machine that will make 60 miles an hour. Severe illness, necessitating confinement indoors is another. A cause that is not unusual, is that owing to the tight money market, a man is forced to give up his little luxuries, for as a well known dealer once remarked, three-quarters of the motorist body are persons who cannot afford automobiles. A desire to tour abroad is another excuse for an owner wishing to dispose of an American car, while a death in the family sometimes warrants a person giving up the automobile, either for financial or other personal reasons. The mere fact that a man has a car for sale, does not say that the machine is unworthy. By dealing direct with the persons selling a car. with the aid of a broker, it is not difficult

At present, there is a demand for used 1906 and 1907 models in good condition. A 1908 American-made car can be sold for about 50 or 60 per cent. of its list price. Second-hand 1907 cars are worth slightly more. From 5 to 10 per cent. commission is the proper fee for a broker selling a car under conditions described. Whether or not the second-hand automobile is a bar gain, depends entirely upon the car, its personal history and the price.

to determine the actual reasons that war-

rant the car being sold.

M. W. C.

Worcester Show is Abandoned.

Worcester, Mass., will not have an automobile show this winter. This was defiinitely determined Friday last when it was found that the Worcester armory, where last year's exhibition took place, could not be obtained this season. There is no other place in the city available, the auditorium in the armory being the largest in the city. About a week ago the State took over the armory from the City of Worcester and now the local authorities have nothing to say whatever about its future conduct. The State authorities last week refused to permit the armory to be used for an automobile show in spite of all the influence members of the Worcester Automobile Club could bring to bear in the matter. They found the authorities more unbending than those of some other States.

Incorporated to Hold Newark Show.

The joint committee composed of members of the New Jersey Automobile and Motor Club and the New Jersey State Automobile Dealers' Association, under whose auspices the first annual automobile show will be held in Newark, N. J., has decided to form a corporation to carry on the exhibit. It will be known as the New Jersey Exhibition Company. The show will take place from February 21 to 29 inclusive, in the auditorium at Electric Park, a resort in the Vailsburg section.

THE MOIOR WORLD

HERE'S THE "IRON HORSE" AT LAST

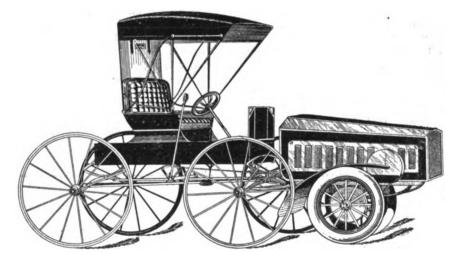
It is "Caldwell's Cylinderless, Boltless,
Noiseless, Cussedless Gasolene Engine"

—Works Running or Standing.

In common with the search for the fountain of youth, and the endeavor to "harness" perpetual motion, the quest for the mechanical horse has been going on for many, many years; in the motor car, the mind of many a restless inventor has found peace and longing satisfaction. But it is not to be questioned that the motor car is not a substitute for the horse in the strictest sense of the word, since it cannot be ap-

Two-thirds of the six-wheel runabout is buggy. The useful reminder is attached to it by what in farm parlance would be known as the "shaves" and through them, transmits its tractive effort to the vehicle proper. As will be evident at once, the cylinderless portion of the outfit is attachable to any sort of carriage or wagon, and furthermore, by suitable adaptation, may be used as a stationary power producer for such useful and domestic operations as sawing wood, grinding coffee, spices and cattle fodder, breaking out stump land, or planting grain. The mechanism also may be attached to a sleigh or bob sled for use during snowy weather.

As for the mechanical portion itself, the motor is rated at 10 horsepower, showing



THE "IRON HORSE" HITCHED TO A BUGGY

plied at the will of its owner to the hundred an one uses which have endeared the patient equine to his ancestors for centuries back, nor can it be used in connection with the "rolling stock" already an outstanding investment with the horse owner. To some it might even appear that the so-called motor buggy is the nearest possible approach to the ideal in this respect. Not so with the persistent Iowa inventor of the "sixwheel runabout" here depicted. His genius has carried him a step beyond the achievements of all others and enabled him to produce the veritable "iron horse" of fiction and fancy.

Although possessed of a motor, perhaps as an attribute to the mechanical arts rather than as a necessity of locomotion, this metal beast according to its inventor's claims has "no cylinder, no bolts, no nuts to work loose, no gaskets to blow out, no packing of any kind." Instead, the "cylinderless, boltless, noiseless, cussedless," gasolene engine, whence springs the locomobility of this locomotor attachment is comprised of a moving "piston" which is hollow and slides back and forth upon a stationary "head," thereby providing means to effect a series of operations identical in principle and effect with that of the ordinary four-cycle method of gasolene operation.

its absolute capability of replacing one or two horses; the plant is firmly mounted on the truck, which, in turn, runs on 15%-inch artillery wheels, 30 inches in diameter, show with 15%-inch solid tires and running on roller bearings on a 15%-inch axle. A year's guarantee goes with the mechanism, which is moreover, a better inducement than the average horse trader is able to offer in the same line.

Certainly the device is peculiar looking to the normal eye. But then, as the inventor says: "Odd things are generally the best." Further, it is evident that a great deal of energy must have been spent in producing it. Of this the inventor further remarks in his catalogue:

"Many of the best skilled machinists and gasolene engine experts have worked on this invention for the last three years,, and no one but the inventor can appreciate the patience and persistent efforts necessary to overcome the obstacles ever presenting themselves in working out the intricate mechanism of a useful and valuable invention, and their reward is the protection of the government in their rights under the patent until they are reimbursed for the money and the tedious, thoughtful hours that have been spent on it."

A company to manufacture the thing is in existence in Waterloo, Iowa.

MACNETO SPARK AT FIRST SWING

Obtained by a Device for Automatically "Snapping" Over the Armature—Details of Construction.

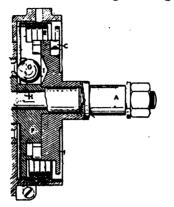
One of the most frequently stated objections to the magneto is the difficulty of "swinging" a large motor with sufficient rapidity to obtain a positive spark for the first ignition. To overcome this difficulty, as well as the possibility of stopping the motor for the same reason when throttled way down or when suddenly overloaded, several methods of producing a sudden throw of the armature past the point of maximum current generation have been devised. One of the most recent of these. which is particularly suggestive because it provides a means for automatically "snapping" over the armature whenever it is run slowly, regardless of whether the motor is being cranked or is running under its own impulses, is that employed in the Unterberg-Helme high-tension magneto, a German production shown for the first time at the Paris Salon.

In this arrangement, the armature instead of being driven through a positive connection has a spring driving gear, the spring being sufficiently strong to keep the armature in absolute synchronism with the driving gear under ordinary circumstances. When its speed is dropped below a certain predetermined amount, however, a peculiar form of automatic latch, comes into action as a result of the reduced centrifugal force, and serves to retard the motion of the armature for a portion of its revolution, releasing it at the instant of timer contact and thus permitting the spring to drive it ahead of the timing gear for an instant and at a sufficient rate to guarantee the generation of a proper spark. The manner in which this is accomplished is shown by means of the accompanying illustrations.

As is apparent, the driving shaft, A, carries a disc, B, to which one end of the helical spring, E, is attached by means of the stud, C, fixed upon its inner face. The other end of the spring is attached to the armature shaft by means of the stud, d, affixed in the face of a plate of peculiar shape which is keyed to the shaft. Upon the side opposite the stud, d, is a projection carrying the radial slot shown in the illustration, which is of such size as to permit the ball, G, to travel freely in it under the action of centrifugal force.

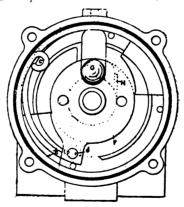
When the ball is at the outer end of its slot, the armature is permitted to turn freely as driven through the spring. When it is at the inner end of its travel, however, any rotation of the shaft, causes the ball to strike a projection H, on the end of the stationary armature casing, thus temporarily locking the armature from further rotation, and permitting the contin-

ued movement of the driving member, B, to wind up the spring. At a certain point, I, in the disc, B, however, is a slight depression into which the ball is forced when the disc has made nearly one complete turn. The effect of this is to permit the ball to jump over the projection, H, thus allowing the spring to force the armature ahead at high speed until the ball again brings up



against its stop, when the process is once more repeated.

In this way at low engine speeds the armature motion is intermittant, and invariably at high speed, while so soon as the motor speed becomes sufficiently great to drive the ball to the outer end of its radial slot, the motion becomes continuous and regular. The magneto to which this arrangement is attached is of the true high tension type, having both primary and sec ondary windings on the armature and hence requiring no external transformer coil. An unusual feature of its construction, however, is the placing of the condenser, which is mounted in the stationary casing of the timer box, whereby it is re-



lieved of some of the vibrations usually sustained in the armature, and is thereby rendered more durable.

Keep Motors Warm in Winter.

"Keep your motors warm," is the advice of H. E. Coffin, vice-president of the E. R. Thomas Detroit Co. "In the winter weather when the car is run at speed, the cooling properties of the radiator are much greater than in warm weather. A motor will start easier and run better if a sheet of cardboard or other light material covers part of the radiator."

READINESS IN MAKING REPAIRS

Parisian Mechanics in Unique Competition to Demonstrate Ability—Judgment as Well as Skill Tested.

A unique form of breakdown competition took place at a motor cab garage in Paris recently in which a number of drivers were called upon to rectify some artificial disorder of the machines under test within a stated length of time and under observation by the judges. Each of the cars, all of which were identical in construction, was placed in a curtained enclosure and only the competitor who was to work on it was admitted to the enclosure with the judges. The difficulties which had to be set right were in no case of a serious nature, being only such as the average driver might be called upon to repair on the road at any time. Thirty-two mechanics entered the lists, and after the preliminary trials in setting right certain engine difficulties, the successful competitors were permitted to compete in a tire replacing time trial.

In one instance a short circuit was created in the magneto by introducing a little piece of lead foil in an inconspicuous place. This was discovered by Paul Miltgen in 1 minute 28 seconds. Only five out of tencompetitors succeed in locating the trouble inside of the allotted 25 minutes, and only two of these excepting Miltgen, came inside of 4 minutes. The second difficulty proved to be a partial stoppage of the induction pipe, but only one competitor was able to discover it, and it took him 11 minutes to do so. Another driver, Bonnet, by name, took just 4 minutes 45 seconds to hunt out a choked carburetter jet and get his engine running, while the sticking float valve was adjusted correctly by Lallement in 1 minute 23 seconds.

Bonnet, second in the general classification, won first place in the tire replacement trials, removing, repairing and replacing one of his tires in 9 minutes and 46 seconds. Miltgen, who won first place in the adjustment trials, lost the tire competition owing to a lame arm. The idea is held to be particularly successful in a general way because it furnishes useful training for the men, sets them thinking and discussing the problems involved, and besides furnishing considerable interest as a contest, is simple and inexpensive to conduct.

It is extremely difficut to impress upon the average driver the importance of frequent regulation of the spark time. Running conditions vary so constantly when the machine is on the road, that it seldom happens a single setting of the spark will serve to best advantage for any length of time. Therefore the operator's finger should never stray far from the controlling lever.



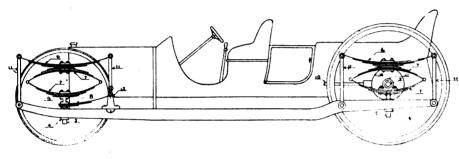
THE MOTOR WORLD

PROBLEM OF THE HIGH WHEEL

Solution Offered in the Form of a New Spring Device—Details of a System of Low Suspension.

According to the ideas of many engineers, the only conceivable way of reducing the mounting and suspension of the motor vehicle to a point where it will be practicable to eliminate the pneumatic tire and replace it with solid rubber is to adopt the high wheel. With the high-wheeled buggy type of vehicle this is possible without effecting any material alterations in the structure. It is evident, however, that for dicated by the numeral 3, being dropped even lower than the rear end, thus lowering the center of the frame sufficiently to permit the adoption of the side entrance type of body. The driving shaft, 10, and differential housing, 14, are outlined in their natural positions, showing their extreme height in the body, relatively speaking.

In the case of the front axle the disposition is practically the same as in the rear except that to the other springs is added a guide spring, 8, which is of quarter elliptical shape and extends from the shackle bracket, 12, on the upper side of the frame, to the lower side of the axle, 9, thus serving to restrain its motion at the same time tending to interfere with any possible excessive rebound which might occur. The



the larger and heavier vehicle, where it is necessary to lower the center of gravity materially, an entirely new system of springing must be devised in order to render possible the use of large wheels. A novel suggestion in this line is found in the system recently designed by Henry Pokorny, Indianapolis, Ind., in which a special type of "three-half" elliptical spring, as it may be termed, is made use of, together with an under-slung frame with low center of gravity and general structural features otherwise similar to those in common use with standard touring cars.

The design in question, which is here illustrated, comprehends the use of wheels of 40 and 50 inches diameter, front and rear, shod with solid tires and mounted on axles of the usual I-beam and tubular type respectively. The lower sides of the main, or elliptical portions of the springs are slung beneath the axles in special perches while the shackle bars are made of sufficient length to lower the frame to the desired clearance above the ground notwithstanding the great height of the spring set. In addition to this, the oscillations of the frame are confined to the vertical sense at both ends by means of guide bars riding in blocks on the frame, but attached to the axles by means of couplings to which they are affixed through ball and socket connections.

Turning to the application of the system to the near axle, it will be clearly apparent that the main spring, 7, is clipped to the secondary semi-elliptical member, 8, and rides in the perch loosely mounted over the axle tube, 2. The frame is supported by the shackle bars, 11, the part in-

rear and front shackles of the front spring are of different lengths in this instance, owing to the introduction of the guide spring and the bracket upon which it is supported.

While there are many arguments in favor of the use of the high wheel, hinging chiefly about the matter of gentle and resilient suspension, it is equally apparent that numerous difficulties stand in the way of its adaptation to present types of vehicle. So numerous and conflicting are these difficulties, in fact, as to prove well-nigh discouraging to the designer who attempts to solve the problem at first hand. So that though its use may come about in the course of time, it is to be expected that it will be brought about by gradual degrees rather than at a single stroke of the designer's pencil. Incidentally, the working out of the questions which are involved in the way of under suspending the frame, and reducing the spring mounting to its lowest terms must be of great benefit in the commercial vehicle field where the low loading platform is a desideratum not yet fully appreciated.

Inspect the Mechanical Lubricator.

In the case of a mechanical lubricator which is driven by means of a chain or belt, it should be borne in mind that the mere fact that the driving gear is in motion does not signify that the mechanism within the tank is working properly, nor that the oil is being fed at the proper rate. Sometimes the little set screw holding the driving pulley or sprocket to its shaft backs out sufficiently to permit that member to turn idly upon it. When the slippage is sufficient

to permit the pumps to remain at rest, the cessation of the feeds will be observable through the sight feed glasses. When it is only sufficient to decrease the rate of feed without stopping it altogether, however, there is danger of trouble in the bearings. To guard against this difficulty which, though rare, nearly always is at the seat of a very troublesome difficulty, it is well to inspect the driving gear of the lubricator from time to time.

Car for the Traveling Photographer.

Like the war automobile and the house car or motor salon of the supra touring order, various elaborate applications of the motor vehicle to the uses of mankind are from time to time appearing. Quite the latest of these is the photographer's car, which is the invention of a Frankfort-on-Main genius. On a motor chassis of special construction is mounted a roomy closed body containing a dark room fully equipped, together with storage space for a large amount of paraphernalia. Apart from the value of such an arrangement to the traveling portrait artist, it would seem that the war correspondent and news photographer well might utilize the idea to profitable advantage.

Keeping Things on the Move.

"See that window across the street," said the manager of the New York branch of a well known automobile concern, pointing to a rival establishment on the opposite side of Broadway. "For almost three months that identical car has been in that window in exactly the same position, without a change of any kind. Nobody expects to see anything new in there any more. I don't mind telling you that if I cannot get a new model to put in our window every week I nevertheless change about with the cars I have, altering the position in the window each time so that there is an appearance of 'something doing.'"

Many Automobiles Escape Taxation.

With 3,000 automobiles owned and operated in Colorado, and valued at between \$3,500,000 and \$4,000,000, but 936 have been reported for assessment, with a valuation for assessment purposes of \$404,405. The State auditor considers this quite remarkable, in view of the fact that there are more than 2,000 cars in Denver alone. Outside of Denver the number of automobiles owned is estimated to be about 1,500.

Labor of Developing a Color.

Few persons fully realize the vast amount of work required to give a body its completed dress. To obtain the new Pope-Toledo blue finish, for instance, it is stated that no less than 32 painting operations are required. Likewise the time required to season the pigments properly is a factor seldom taken into account, though it totals up very rapidly.



HEARING ON TIRE CHAIN ORDINANCE

Motorists Present Their Protest to New York City Park Board—Discussion of Legal Points Barred.

Because of apparent lack of organization and slimness of attendance the hearing before the New York City park board on Thursday last, 26th ult., arranged by Charles Thaddeus Terry, counsel for the National Association of Automobile Manufacturers, in behalf of motorists generally, to protest against the recent ordinance passed by the bark board, prohibiting the use of tire chains on any of the roadways under the jurisdiction of the board, left no great impression upon the servants of the city. Aside from being assured that the ordinance would be only enforced on gravel and macadam paved thoroughfares the protestants against the ordinance did not make any great apparent headway. The hearing was held in the Arsenal in Central Park before President Henry Smith, Joseph I. Berry and Michael J. Kennedy of the park board.

Melvin Bender of the New York State Automobile Association was the first speaker. He described the various kinds of non-skid devices as used on automobile wheels and told of their several actions on the surfaces of roads. He brought out the point that while steel studded tires had a tendency to damage a road, tire chains left only their imprint in a road surface, like a matrix in a soft surface. He also touched on the legal aspect of the ordinance, asserting that the park board did not have legal authority to pass and enforce such an ordinance. President Smith replied by stating that before the ordinance had been drawn up, the city's corporation counsel had been consulted, and that the board had been assured by him that they had full power to pass and enforce the ordinance. Mr. Smith also put a damper on some of the other prospective speakers by saying that the legality of the ordinance would not be considered, as that phase of the question must be discussed with the corporation counsel of the City of New York.

That tire chains are the result of ten years of experimental work with various non-skid devices, and are the best for such purpose, was advanced by Hiram Percy Maxim, of the tire committee of the Association of Licensed Automobile Manufacturers. Although he is a lawyer, Charles Thaddeus Terry, did not consider the legality of the ordinance, due probably to President Smith's earlier admonition that an argument on that score would not be listened to. Mr. Terry therefore said that as automobiles are constantly multiplying in number, that roads must be adapted to their use, and that if greasy roads were dan-

gerous, they should not be made more so by an action of the park board in enforcing an ordinance that prohibits making them as safe as possible by stopping the imperative use of non-skid devices of some sort.

The general tenor of W. W. Niles's remarks was much the same as the preceding speaker, and A. R. Shattuck, former president of the Automobile Club of America, suggested that the park board prohibit the use of tire chains only in dry weather, but allow them to be used in rainy or snowy weather.

Russell A. Field, secretary of the Long Island Automobile Club, said that the members of the Brooklyn organization were of the opinion that the ordinance had been passed under a misapprehension as to the real effects of the various kinds of nonskid devices, and that if the members of the park board could find time to make some personal experiments, the edict against tire chains would be removed, he thought. The hearing was adjourned after Messrs. Bender and Terry submitted briefs.

The hearing was arranged after a protest from metropolitan automobilists generally following the enforcement of the ordinance prohibiting tire chains on any of the roadways under the jurisdiction of the park board. The precise text of the ordinance follows:

"No automobile or horseless or other vehicle wearing chains over the tires of their wheels shall enter the public parks or the traffic roads under the jurisdiction of the Board of Parks without permission of the commissioners having jurisdiction. This rule and regulation shall take effect December 16, 1907."

It is a question whether the park board had a right to pass the ordinance in opposition to the provisions of the State law regulating the use of motor vehicles, which was passed in 1904. Local ordinances are prohibited as set forth in Section 4, subdivision 3, which reads:

"Subject to the provisions of this act local authorities shall have no authority to pass, enforce or maintain any ordinance, rule or regulation requiring any owner or operator of a motor vehicle any license or permit to use the public highways or excluding or prohibiting any motor vehicle whose owner has complied with section 2 of this act from the free use of such highways except such driveway, speedway or road as has been or may be expressly set apart by law for the exclusive use of horses and light carriages."

But the right of the park board to pass the ordinance is a question that will have to be argued or fought out in the courts. The point at moment is that apparently nothing was gained at the hearing last Thursday as the park board refused to listen to anything that would tend to suggest that it acted outside its rights in passing the ordinance.

"NATIONAL" AND "INTERNATIONAL"

Official Definition of the Terms as Applied to Racing—How the Promoter Can Secure a Sanction.

"A national race is a race where the entrants are respectively named by and represent any two or more of the automobile clubs affiliated with the American Automobile Association."

Therefore should Willie Iones of the Hohokus (N. J.) Automobile Club, and Tommy Brown of the Automobile Club of Bingville (N. Y.) wish to conduct what would be known and recognized as a "national race," under the American Automobile Association's definition, all they will have to do is to select a name for it. secure a sanction upon recommendation of their clubs, providing those clubs are affiliated with the governing body. Of course, it is not quite as bad as that, but according to the resolution as adopted at the meeting of the executive committee of the racing board of the American Automobile Association, in New York City, Saturday last, 28th inst., any one can promote a "national race" if the entrants are nominated by two or more clubs, no matter how obscure they may be, conditional only on the fact that they are affiliated with the American Automobile Association. On the face of it the resolution, while probably designed to correct an evil, smacks of the ridiculous

The other resolution passed at the same time was a definition of an "international race." It says that "an international race is a race where the entrants are respectively named by and represent any two or more of the recognized national affiliated automobile clubs of the world."

The meeting, which was presided over by Frank G. Webb, in the absence of Chairman Jefferson De Mont Thompson, who took a day off to get married, did not transact any other business except the granting of several sanctions, among them one to "Robert Lee Morrell, chairman, First road race for Briarcliffe trophy, Westchester county, New York, on April 24th, 1908."

This is popularly supposed to be the stock car race "for sweet charity'\$ sake" which originally was undertaken by Mr. Thomas Francis Moore's "exclusive" suspiciously subdued Metropolitan Automobile Association, and more recently by somebody's "Automobile Manufacturers' Committee" by whom Moore is now employed "accelerating public sentiment" and convincing the thousand and one manufacturers-not to mention importers-who know nothing of the "committee," that if they do not have a road race for stock cars in April next, their business will simply go to the bowwows. Moore is making a manful effort to "make good," although Sweet

Charity has been slapped on the wrist and the "surplus receipts"—good old Surplus Receipts!—are to be "turned over to the county for the benefits of the taxpayers"—happy, happy taxpayers! The Morrell-Moore "manufacturers' committee" now has a map of the course, Mr. Morrell has a sanction and Mr. Moore sends word that he has three real entries. There are said

ufacturer on the mysterious committee.

The other sanctions granted by the A. A.
A. were issued to the Automobile Club of
America, for the Florida carnival beginning
March 2d, and to the Savannah Automobile
Club for its series of stock car road races
to be held during the week beginning
March 15th.

to be two importers and one American man-

The resolutions previously referred to and which are to be incorporated in the racing rules, were introduced by Dave Hennen Morris, and seconded by Robert Lincoln Lippitt.

Why New York Has Many Poor Roads.

Every citizen of the State of New York is so used to feeling proud and asserting that his State is the wealthiest State in the Union, that to him the facts in regard to the condition of the highways of the State will seem strange. The 933 towns in the State into which the counties are divided, are charged by statute with the care and maintenance of the highways and bridges existing in each town. The total mileage of highways cared for under this statute is 74,000 miles. The average tax levy in each town for the entire State is \$44 per mile. The total highway tax levy in money and labor is \$3,284,000, a very large sum of money, until one realizes that this money is only to care for the highways between the melting of snow in the spring and its return in the fall, and that \$44 a mile means that each highway commissioner has eight miles with which to care for and maintain each foot of highway in the town during the season. With this money he must grade it, turnpike it, put on permanent material, build sluices under five feet, remove the loose stone, and keep it smoothed from ruts. It is every evident that both under the labor system and the money system alike, no permanent improvement can be made in the highways of the State except in the very rich towns, unless the highway system is changed.

Organized to Promote Touring.

To promote touring among members of their own set several socially prominent young New Yorkers have formed the Motor Car Touring Society of the City of New York, a certificate of incorporation having been filed with the Secretary of State. Albert Eugene Gallatin is named as president; Percy R. Pyne, 2d, as vice-president, and Orme Wilson, Jr., secretary-treasurer. These with Stuyvesant Fish, Jr., and Marshall R. Kernochan constitute the incorporators.

THE MOTOR WORLD

THIRTY-ONE WERE PENALIZED

Only Eight Contestants in Quaker City Endurance Run Made Perfect Scores—

Bad Roads Partly to Blame,

Eight perfect scores out of thirty-nine starters in the two main classes tell the story of the wholsale elimination of possible clean records in the second annual endurance contest of the Quaker City Motor Club in its run from Philadelphia to Allentown, Pa., yesterday, New Year's Day. To the unfavorable condition of the roads on the second control of the run was due the many black marks.

Starting in the morning with every indication of an uneventful and parlor-car trip, the run proved to be one of the most strenuous and exacting ever arranged by the energetic Quaker City organization. With a twenty miles an hour schedule that was easy as far as Doylestown, the contestants followed a trail of confetti over a system of highways that are a standing disgrace to the State. Coupled with the necessity of careful and slow operation came that constant bugbear-tire trouble. The unresisting frozen mud crust that held what seemed to be an unusually large crop of nails, served to flatten many a good full blown tire, and played havoc with scores of the unfortunates. When the committee ceased its arduous labors at Allentown late in the evening, but six cars remained as perfect bidders for the MacDonald and Campbell trophy.

The six drivers in the touring class that finished the first day with perfect scores are C. W. Hoffman, Stearns; T. W. Berger, Oldsmobile; Frank Yerger, Studebaker; Robert Shirk, Stoddard-Dayton; Hal K. Sheridan, White; and Frank Leflen, Garford. Owing to the failure of several checkers to turn in cards the results of several other cars have not been computed.

Two drivers survived in the division for high powered runabouts—J. Trumbull, Packard, and Samuel Collum, Stearns. In Class C, for small runabouts, which check in only at morning and night, no results have been announced, and in Class D, the go-as-you-please division, which do not report to checkers, the winner will be decided after the finish to-day by a vote for the most popular driver in that section of the endurance brigade.

That the test on Wednesday was a truly hard one is agreed to by all those who participated in it. The bad roads on the latter part of the journey were responsible for many late arrivals and consequent loss of points. There was but one accident and that proved not serious. While trying to make up schedule time H. P. Fry pushed his Columbia car to the limit. Three bad water-breaks did the rest, and Hugh Coyle, the mechanic, was bounced out of the seat.

He landed on the hard ground face first, and was rendered unconscious for twenty minutes. Although shaken up quite badly and with his face cut and bruised, Coyle announced his determination to return with the car to Philadelphia. William Cathcart's Corbin sideswiped a bridge and broke its mudguards, but that was all, though quite sufficient to make Cathcart "bless" the roads that caused him to lose points.

The worst roads were met with between Doylestown and Ottville, a section included in the second control. Bad at all seasons it was at its worst on Wednesday, and there were plenty of perfect scores lost simply because the drivers could not go any faster than ten miles over the deep frozen ruts that prevailed. With the exception of a few miles between Easton and Nazareth, where the road was soft and deep, the course was good, but these two instances of miscrable highways more than offset the good ones.

To-day's run from Allentown back to Philadelphia will conclude the contest. The drivers are apprehensive on account of reports of unusually bad roads, especially in the vicinity of Kutztown. The route takes the contestants through Reading, Pottstown and Norristown, a distance of 93.7 miles. This with the distance of the first day's run—78.9 miles—will make a total of 172.6 miles.

According to the report given out last night this is the way the cars survived the first day's run:

Class A (touring cars)—O. W. Hoffman, Stearns, perfect; T. W. Berger, Oldsmobile, perfect; Frank Yerger, Studebaker, perfect; Robert Shirk, Stoddard-Dayton, perfect; Hal K. Sheridan, White, perfect; Frank Leflen, Garford, perfect; P. B. Huyette, Peerless, 1 point; Harry Michenor, Lozier, 2 points; J. P. MacNichol, Matheson, 3 points; H. F. Fry, Columbia, 4 points; A. J. King, Studebaker, 4 points; H. B. Shade, Pullman, 7 points; H. B. Hill, Royal Tourist, 8 points; C. E. Titman, Matheson, 8 points; Bert Maucher, Peerless, 10 points; William Crawford, Franklin, 11 points; A. J. Martin, American Mors, 15 points; Robert Autschenfelter, Autocar, 18 points; Webb Jay, Kisselkar, 25 points; J. A. Moran, Stevens-Duryea, 23 points; W. Cathcart, Corbin, 39 points; C.-A. Percival, American, 68 points. The following drivers had not handed in cards: H. K. Knepper, Frayer-Miller; Maylin Leinau, Acme; N. J. Fox, Locomobile; H. W. Greenwalt, Mitchell, and J. W. Florida, Locomobile.

Class B (high-powered roadsters)—J. Trumbull, Packard, perfect; S. H. Collum, Stearns, perfect; Robert Morton, Pullman, 3 points; E. T. Youse, Thomas, 5 points; Stewart LaFear, Pullman, 7 points; A. A. Jones, Ford, 11 points; P. E. Varney, Oldsmobile, 75 points. The following drivers had not handed in cards: Robert Maynes, Autocar; Thomas Wilkinson, Packard; William Henry, Ford; J. W. Parkin, Jr., Packard, and William Haupt, Columbia.

SUOWING A CUSTOMER HIS NEEDS

Getting Back at Him with His Own Specifications—An Illustration of Fine Art in Selling.

There are many kinks in the slender thread which the calesman must follow in order to secure his orders, but few which cannot be unraveled by close familiarity with the workings of the human mind and that peculiar constructive faculty of argument which enables the successful merchant to offer the customer a fabric of reason exactly suited to his comprehension and tastes. The man who adds psychology to his selling equipment and uses it judiciously in displaying his technical and worldly wisdom, is he who not simply takes orders, but delivers the goods on the one hand, and the cash on the other. A striking case in point is related by A. J. Banta, who frequently has occasion to exercise this trait in the management of the Chicago Branch of the Locomobile Co., of which he is in charge.

Not long since, Banta had occasion to take on a new salesman, and for the purpose chose a man of considerable business experience and evident stability, who had at one time been possessed of means and was supposedly thoroughly conversant with the type of man with whom he would have to deal in connection with the Locombile business. After this man had been at work several days he interviewed him in an effort to discover how he was getting on. It appeared that in one particular instance, he had called upon a well known architect several times, had been well received, and had never failed to obtain a hearing, but had come away each time without arriving at any definite conclusion.

"Does he really want to buy a car?" asked Banta.

"Why, yes."

"Does he know what kind of a car he wants?"

"Yes, in a general way."

"Have you discussed the horsepower with him, the color and equipment, and fittings, definitely enough so that you know his tastes pretty well and understand about what his idea of a car would look like?"

"Yes, I think so"—and he proceeded to run over the matters which they had considered.

The upshot of it was that in the afternoon the salesman called on the architect and presented him with a regular contract form for the delivery of a car, with every detail closely specified. Under instructions from his chief, he merely laid the form on the customer's desk and asked him to look it over and sign, after making any alterations he saw fit.

At the end of five minutes the contract was signed and delivered over to the elated

salesman, and then the architect swung about in his chair and said: "There, now you have given me something to work on and put it in a way that I can grasp. You see a man in my profession is accustomed to seeing things in black and white. My mind is filled with a hundred and one things and it is next to impossible for me to carry all the details of anything clearly in my mind. Here, you give me my ideas in the form in which I am accustomed to deal with them. I know what I want and what I don't want, but I have neither the time nor the energy to summon those ideas and give them to you in so many words. I don't pretend to say you might have closed with me at once if you had brought this to me in the beginning, but I do say you would have stood but a small chance if you had kept on trying to make me remember and tell you what I wanted and how I wanted it fixed."

Alcohol as Fuel for Heavy Trucks.

By raising the compression of the motor from 78 pounds to 112 pounds, and putting a hot water packet around the intake manifold, the Hewitt Motor Co. has adapted one of its five ton gasolene trucks for use with alcohol. A demonstration of a truck so fitted was given last Saturday from the company's salesrooms on East Thirty-first street, New York. The vehicle was equipped with a regular gasolene carburetter, and beyond fitting the latter with an intake arranged to heat the air as it enters there was no special preparation other than the changes mentioned. The motor compression was raised by using longer pistons with dome shaped heads.

The truck for its alcohol demonstration bore a flat body on which was placed a row of boxes fitted with seat cushions for the benefit of those wishing to ride along with it. About 1,000 pounds of sand in bags was carried. The first day's run demonstrated the flexibility of the motor with alcohol fuel, while tests were conducted a few days later with a full five ton load to show that the change in fuel does not lessen the capacity of the truck. The motor is rated at 32 horsepower and has four cylinders, 4½ by 5½ inches. It starts cold on denaturized alcohol, with Simms-Bosch ignition.

The flexibility was proved by the fact that the motor could be run fast or slow quite as easily as with gasolene. The truck was driven through city traffic with no more numerous changes of gear than with gasolene, and as far as could be observed, there was no practical difference in the use of the two fuels. The exhaust with the alcohol was colorless, but very pungent, if not stimulating. Beyond the fact that the vehicle bore a cloth sign proclaiming it as a "5 ton alcohol truck," the passerby could not distinguish it from a regular gasolene truck, which it was except in the matter of the slight alterations noted

INDICATING SPEED BY COLORS

Unique Foreign Device to Aid in the Prevention of Scorching—Features of

Its Mechanism.

It is several years since the proposal to regulate the speed of motor vehicles by means of indicators more or less under the jurisdiction of governmental authorities was first heard abroad. A system invented on German soil was then described as showing the speed at which any vehicle was traveling by means of colored discs visible for some little distance in front of and behind it. That this idea is still extant is shown by a recent report from American Consul H. Albert Johnson, of Liege, who describes the difficulties encountered by the police in obtaining evidence of violations of the speed law and outlines the method by which it is hoped to overcome them.

"The demand for a reliable and accurate speed register has been met by a Belgian inventor, who has devised an apparatus which, in the experimental trials now taking place gives entire satisfaction," he says. "This apparatus consists of a box placed in the forward part of the vehicle, directly in view of the chauffeur, and containing certain machinery that is connected to the axle by a flexible rod that transmits each revolution of the wheel to the registering apparatus. The mechanism is arranged to mark three different rates of speed; that is, 15, 30, and 60 kilometers (9.32, 18.63, and 37.26 miles) per hour, indicated respectively by a white, red and blue disc. Thus when the car is running in a town where the speed limit does not exceed 10 kilometers, the white disc is the one that should be visible; if running in the country, where the speed limit is 30 or 60 kilometers, then either the red or blue disc should be seen. In this manner the moment a car is near enough to permit of the disc being seen the rate of speed is known.

"If so desired the car can be stopped and the rate of speed, as indicated by the disc, can be verified by an examination of the register, which is arranged to indicate by means of an endless revolving ribbon connected with the mechanism, the exact rate of speed. This perforated band or ribbon may be demanded by the controlling authorities as often as may be deemed advisable, say once every month, and all indications of having exceeded the speed limit, which the ribbon would have registered could be noted.

"Of course the box containing the registering mechanism would be closed and sealed in such a manner that neither the chauffeur nor the owner of the car could open it nor take out the registering ribbon without the intervention of the authorities having control of such matters."

SEVERE SENTENCE FOR A MOTORIST

Why His Plea of Guilty Failed to Save Him from Imprisonment—He is Heavily Fined as Well.

A jail sentence of three months at labor in addition to a fine of \$1,000 was meted out to George Meserve Weatherbee, of 26 Chester avenue, Waltham, Mass., 26th inst. Weatherbee, who is a member of the firm of Weatherbee & Smith, automobile dealers of Boston, pleaded guilty to running down with his automobile and causing the death of Warren F. Batchelder, of Cambridge, on the night of May 5th, at the corner of Western and Putnam avenues, Cambridge. The sentence is, so far as known, the heaviest ever inflicted in Massachusetts for an offense of the kind.

When the case first came up in the last term of court Weatherbee pleaded guilty to a charge of manslaughter, but sentence was suspended until the present term of court, the dealer in the meantime being held under \$10,000 bonds. When the case came up last Thursday, Captain Hurley, of the Cambridge police force, made a statement of the facts in the case. He told how Batchelder left a street car on the morning of September 6th, and of his being struck by Weatherbee's automobile. He said that Weatherbee never slackened his speed, but hurried away from the scene of accident, without attempting to find out if the man he struck was seriously hurt. Weatherbee later was discovered by Hurley's lieutenants, after the automobile had been found in a Newton stable. The arrest was made at the garage run by Weatherbee in Boston.

District Attorney Arnold Scott, for the State, made an address, citing the circumstances, and asked Judge Hardy to impose a sentence of three months in the house of correction in addition to a fine of \$1,000. Attorney Proctor pleaded that only a fine of \$1,000 be imposed. Judge Hardy, however, considered that the request of the district attorney was very moderate. He said that if it had not been for the energies of the police Weatherbee would still be at large; that it was through no desire on the part of the prisoner that he was before the bar. The court continued that the prisoner evidently had not stopped to see how severely he had injured the man, or to offer any aid, but that his one object seemed to be to get away from the scene of the accident. Following which remarks he imposed a sentence of three months in the house of correction and a fine of \$1,000.

Weatherbee bore up well under the ordeal and after paying the fine walked with a court officer across to the jail. He has a wife and three children, the youngest only about one month old. After being locked up in the receiving cell Weatherbee was

given a suit of the regulation attire. The Boston dealer will have to work in the machine shop of the institution for the next three months, and will be accorded no privileges not allowed other prisoners, who have to arise at 6 a. m., make their beds, wash the cell and put everything to order, and after breakfast of bread and coffee at 7 o'clock, work until noon. Dinner consists of soup and bread. After dinner Weatherbee will have to work until dark. when he will receive a supper of tea and bread. The only food delicacies that he can have sent to him from the outside world are fruits. After supper he may read or take other recraetion in his cell until 8 p. m., when the lights are put out.

Bay State Law Makers Busy Again.

Promptly on the first day of the new year the Massachusetts legislature entered upon its annual task of grinding out new laws and putting a fresh edge on old ones. The job usually eats up about half of the year, leaving the other half for political campaigning. Consequently, Massachusetts has more law to the square inch than any other State in the Union.

Of course the automobile, with its owner and its driver, shares the attention of the ambitious city lawyers and the bucolic wiseacres who constitute the largest elements in the composition of "the Great and General Court." There will be no exception in this respect this year. Suggestions for automobile legislation are promised from various sources. One of the most noteworthy will be in the form of a measure that has been in process of incubation in the Safe Roads Automobile Association, in which Colonel William D. Sohier is the leading spirit. It is intimated that this association will ask for a provision of law under which a court may, at its discretion, impose the penalty of imprisonment in cases of flagrant violation of the requirement concerning the display of number plates.

Chicago Show "Bouncers" Fined.

An echo of the Chicago show was heard in the Harrison street court, that city, last week when Judge Newcomer fined four men, employed at the show, for forcibly ejecting Elton Lower, a prominent Chicagoan, after he had paid his admission. Lower testified that he had paid admission for himself and his wife and had left the main building to visit the exhibits in the annex. When he attempted to return to the main building, he declared, he was stopped by one "Sig" Hart, who called Alfred Beaumont, in charge of the ticket takers. Beaumont, it is stated, ordered Hart, Henry Barstow and Jacob Bunge to eject Lower from the building, which they proceeded to do in no gentle manner. Lower had the four arrested on an assault and battery charge and Beaumont was fined \$50, Hart and Barstow \$5 each, and Bunge \$1, the latter not having taken such a strenuous part in the proceedings.

DANGEROUS JERSEY ROADS MARKED

What is Done with Part of the Money Exacted from Motorists—Sign Boards to Promote Safety.

At least some of the money New Jersey takes from the motorist in the form of license fees is devoted in part to the promotion of his safety on the roads in that State. "Go Slow," is big letters on a black signboard placed at the right hand side of the road is the warning that greets him wherever danger lurks. During the past year \$4,000 of the income derived from license fees has been expended in placing such signs at places that were considered perilous. An unusual number of them are to be seen in the southern portion of the State near the seashore resorts.

Wherever a bad stretch of roadbed exists, wherever there is an especially sharp turn, wherever some hidden bridge, uncertain passage through a woods, or anything that would endanger the motorist in the least there a signboard has been erected.

The boards have been put at such an elevation and at such a distance from the danger spot that they are visible a long distance away, and the motorist running at top speed is given time to slow down before he reaches the section of the road where danger exists.

Nearly all of the railroad grade crossings have also been protected in a similar manner, but here a larger sign with the warning "Railroad Grade Crossing—Listen" is placed. The many crossings in South Jersey and in the northern part of the State as well are now guarded in this manner, and where the crossing is considered more than ordinarily dangerous the "Go Slow" sign has also been added. The work is to be continued and will extend more largely toward the northern and eastern portions of the State than it has thus far extended.

Toledo Organizes Its First Club.

Although Toledo, Ohio, has a population of about 150,000, strange to relate, until within a week ago it could not boast of an automobile club. Several automobile owners got together, formed an organization committee, resulting in the formation last week of the Automobile Club of Toledo, with 125 charter members. The club will pay particular attention to the subject of good roads, and announces that it will assist the authorities in enforcing laws governing the use of motor vehicles. The officers elected are: President, E. D. Libbey; vice-president, E. J. Marshall; treasurer, J. M. Steenberg; secretary, George S. Mills; governors, the officers, Marshall Sheppey, W. W. Morrison, John Mockett, J. J. Manning and F. M. Brigham.

The Week's Patents.

866,238. Power Transmission Coupling Device. Antonio M. Van Halen, Madrid, Spain. Filed June 3, 1907. Serial No. 377,-003.

1. In combination, a driving shaft, a sleeve surrounding said shaft and provided with a non-rotatively and slidably mounted flanged collar, means for shifting said collar, a pulley loosely mounted on said shaft and provided with a band receiving recess, a coupling band for said recess, an arm rigidly mounted on said shaft, means connecting said arm with one end of said band, a crank shaft mounted in said arm and connected with the other end of said band, an actuating member carried by said arm and traveling freely between the flanges of said collar, and a threaded connection between said actuating member and said crank shaft.

866,241. Ignition System for Explosion Engines. Richard Varley, Englewood, N. J., assignor to The Autocoil Company, a Corporation of New Jersey. Filed Nov. 13, 1906. Serial No. 343,179.

1. A means for starting explosion engines with an electrical ignition system, comprising an auxiliary generator having a foot pedal, and means whereby said generator is automatically cut into the ignition circuit when said pedal is depressed.

866,254. Change Speed Lever for Automobiles. Charles W. Berry, Portland, Me. Filed Jan. 2, 1907. Serial No. 350,342.

1. The combination with a change gear lever, notched segment and pawl for motor cars of an auxiliary lifter for disengaging the pawl, an operating handle for actuating said lifter and means for tripping said lifter between the notches.

866,282. Shifting and Locking Mechanism for Friction Band Clutches. James P. Karr and John D. Rauch, Logansport, Ind. Filed Feb. 12,1907. Serial No 357,014.

1. The combination with a rotatable shaft, a driving gear keyed thereon and a drum loose thereon and provided with a peripheral friction surface, of a friction band applied to said surface, pins passing through the peripheral portion of the gear and provided with cranks one of the pins being connected with both ends of the divided band, single and double cranks applied to the pins on the outer side of the gear, an equalizing bar connecting the single crank with the double one, a yoke which is slidable on the hub of the gear, toggle links and pivoted knuckles connecting the yoke with the cranks of the two pins, and a shifter for moving the yoke in and cut for applying the band and locking the same automatically as shown and described.

866,294. Motor Vehicle. William J. Miller, Columbus, Ohio, assignor to The Oscar Lear Automobile Company, Columbus, Ohio, a Corporation of Ohio. Filed Jan. 23, 1907. Serial No. 353,729.

1. A motor vehicle comprising an under frame construction, a cab body mounted thereon, a rearward extension upon said cab body, a platform at the upper side thereof, an elevated seat supported on said platform, means within easy reach of said seat for controlling the operative parts and the brakes on said vehicle, the connections between said means and said under frame construction for controlling said operative parts being housed within said extension.

866,488. Variable Speed Gearing. James G. Lambert, Hadleigh, and Benjamin E.

Waddams, Ealing, England. Filed March 9, 1907. Serial No. 361,469.

1. In a variable speed gearing, the combination with the driving and driven shafts, of a worm mounted loosely on the driven shaft, a clutch for coupling said wheel to said shaft, a plurality of worms of the same diameter and normal pitch but each having a different number of threads, the said worms being all mounted on a sleeve free to slide on but rotate with the driving shaft, means for locking said sleeve in the several positions to retain the worms in their operative positions, and means for disengaging the clutch, as set forth.

866,537. Pneumatic Spoke Wheel. Arthur H. Thibault, Valparaiso, Ind. Filed Oct. 13, 1905. Serial No. 282,606.

1. A wheel comprising a sectional rim the outward movement of which is confined within the maximum normal circumterence of the wheel, and pneumatically cusnioned spokes each consisting of telescopic members and a packing interposed between the head of the inner member and the closed end of the outer member.

866,539. Repair Device for Pneumatic Tires. Philip C. Travers, New York, N. Y., assignor to Michael P. McNamara, New York, N. Y. Filed July 26, 1906. Serial No. 327,929.

1. A protecting device for the inner tube of a pneumatic tire comprising a relatively-rigid body member having a flange on that edge thereof contiguous to the heel of the tire casing for engagement with said heel and having the other edges of said body member curved outwardly for engagement with the inside of said tire casing and for protecting the inner tube against abrasion by said edges.

866,540. Vehicle Wheel. Horace Villiers-Stuart, Louisville, Ky. Filed Dec. 10, 1906. Serial No. 347,147.

1. In a wheel, the combination of radially movable tire-segments, connections whereby the radial displacement of one segment is similarly transmitted to all of the other

"REMY MAGNETO"

Means absolute reliability of the ignition system.

Investigate for your 1908 car.

REMY ELECTRIC CO., Anderson, Ind.

THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO. (Estab, 1851) INDIANAPOLIS, IND.

WANTS AND FOR SALE

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

FOR SALE—Model K Cadillac runabout, excellent condition, complete with top, lamps and generator. THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

A BARGAIN—1907 20 H. P. 4-cylinder Model "G" Cadillac runabout, best of condition; demonstration at any time. Address MORGAN & WRIGHT, 214 W. 47th St., New York City.

FOR SALE—Absolute closing out sale of the largest stock of new and second-hand automobiles in the United States. Write for Clearance Sale List No. 21. Nous is the time to buy. ROCHESTER AUTOMOBILE CO., Jos. J. Mandery, Prop'r., Rochester, N. Y.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

HAYNES

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY Members A. I., A. M. KOKOMO, IND

Oldest Automobile Manufacturers in America NEW YORE, 1715 Broadway—CHICAGO, 1702 Michigan Av.



I N D E X

Built to outwear an auto, and it will
Send for Booklet

Index Speed Indicator Co.
MINNEAPOLIS, MINN.

Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order.

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

"THE BEST IN MOTOR CARS"

Palmer & Singer Mig. Co. 1619 Broadway, New York

Empire Tires

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St. CHICAGO—20 LaSalle Street and 1615 Wabash Avenue. FOBES AUTO SUPPLY CO., Portland, Oregon. FOBES AUTO SUPPLY CO., Seattle, Washington. WAITE AUTO SUPPLY CO., Providence, R. I.

segments, and cushioning devices for automatically returning the segments to normal position.

866,631. Sparking Plug for Explosive Engines. William Diebel, Philadelphia, Pa. Filed July 13, 1906. Serial No. 326,010.

In combination, a body having a threaded upper end, the threaded lower portion having a small opening therein, a sparking point extending inwardly from the wall of the lower opening, a shoulder in the body, a heat insulating washer resting on the shoulder, a porcelain insulator fitting to the bore of the body and resting on the washer, said washer and porcelain insulator having coinciding apertures, and said insulation terminating at the washer, a conductor extending through the aperture of the insulator and washer having a sparking point terminating near the sparking point in the wall of the body and a threaded collar in the body to bear on the porcelain insulator.

866,693. Rotary Explosion Engine. John F. Southern Wilmington, Del., and Henry J. Griest, Chester. Pa.; said Southern assignor to said Griest. Filed April 27, 1904. Serial No. 205,111.

1. In a rotary explosion engine, a revolving piston, an annular cylinder in which the piston revolves, a piston carrier concentric with the annular cylinder and with a semicircular concave cross section, intersecting the annular cylinder and fitting the concavity of the piston holder, and an opening in the abutment to permit the passage of the piston, substantially as shown and described.

866,976. Rocker Bar Gear for Vehicles. George W. Stevenson, Reading, Pa., assignor of one-half to Milton H. Schnader, Lebanon, Pa. Filed Sept. 26, 1906. Serial No. 336,250.

1. In a vehicle, a resilient support for the frame of the body thereof consisting of a rocking bar which is interposed between said frame and the axle of the vehicle and resting upon the latter and endwise compressible springs bearing against the opposite ends of said bars in reverse direction.

866,980. Chain. Arthur B. Taylor, Indianapolis, Ind. Filed June 28, 1905. Serial No. 267,379.

1. A chain composed of a plurality of successive pairs of links, the inner link of a pair comprising two cross bars and an intermediate connecting member, and the outer link of a pair comprising two cross bars each passing through an inner link between the two cross bars thereof, and also comprising a pair of side bars which connect and are permanently secured to the cross bars of said outer links, the adjacent faces of each pair of cross bars being formed to co-operate with a transversely removable intermediate compression member, said transversely removable compression member being at all times accessible at one end without dismembering the links.

866,986. Wheel Rim. John K. Turton, New York, N. Y. Filed Sept. 22, 1906. Serial No. 335,706.

1. In a wheel, the combination of a felly, a rim extending around the same, a tire extending around the rim, said rim being expansible and contractible, and means permanently carried by the rim and operating on both sides of the rim simultaneously for effecting the expansion and contraction of the rim, substantially as described.

867,057. Vehicle Brake. John M. Lansden, Jr., Orange, N. J. Filed Oct. 14, 1904. Serial No. 228,418.

1. The combination with an axle, having a squared portion, brake blocks engaging therewith, means for elastically engaging and for separating the brake blocks, the said brake blocks having an opening of hexagonal shape through which the axle passes, whereby the brake will be self-centering.

867,075. Internal Combustion Engine. Otakar Podhajsky, Warren, Pa. Filed Nov. 27, 1906. Serial No. 345,287.

1. In an internal combustion engine, a cylinder, and a removable cylinder head of substantially cylindrical form whose diameter is equal or greater than that of the cylinder bore, the outer surface of the cylinder head being provided with a plurality of shoulders fitting against similar shoulders on the cylinder bore; one of the valves controlling the cylinder being provided with a passage controlled by said valve and registering with a passage in the cylinder bore, substantially as described.

867,122. Gas Engine Starter. Raleigh W. Godfrey, Elyria, Ohio, assignor of one-half to H. F. Thompson, Lexington, Ohio. Filed March 23, 1906. Serial No. 307,603.

1. A gas engine starter having a tubular pump barrel, a liquid receptacle mounted on said barrel and having an orifice opening into said barrel, a plunger in said barrel adapted to traverse said orifice and a heating pan on the bottom of said barrel beneath said receptacle.

867,211. Circuit Making and Breaking Device. Andrew L. Riker, Bridgeport, Conn., assignor to The Locomobile Company of America, New York, N. Y., a Corporation of West Virginia. Filed Jan. 18, 1904. Serial No. 189,421.

1. A circuit making and breaking device provided with a contact member and impact means for enforcing the making of the circuit.

867,207. Fly Wheel Construction for Gas Engines. Archibald J. McCollum, Chicago, Ill., assignor to Armac Motor Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 21, 1906. Serial No. 348, 855.

1. A fly wheel, said wheel being constructed or two discs each of which has an annular rib at its periphery, an outwardly extending boss located on each of said discs, there being a taper socket is said bosses, an outwardly extending hub at the center of each of said discs, a rod mounted in each of said hubs whose external diameters are coincident with the external diameters of the hubs, each rod having means for securing and holding it in position, and a steel sleeve fitted over each rod and the exterior surface of the adjacent hub, for the purpose set forth substantially as described.

867,271. Automobile Heating Appliance. Paul P. Hofmann, Chicago, Ill. Filed Dec. 15, 1905. Serial No. 291,854.

1. In combination with an automobile comprising a body, an engine, a part through which the engine exhausts, heated by such exhaust and located at a level below the body, a jacket arranged to conduct air into such proximity to the exhaust heated part as to be heated thereby, a flue leading upward from said jacket into the body, said jacket and flue forming an air passage, and one of said parts being provided with an air escape opening to a point without the body; and means operable from within the body for regulating the passage of air through said flue and said escape opening.

867,279. Explosive Engine. Martin C. Kessler, Denver, Colo., assignor to The Kessler Motor Company, Denver, Colo. Filed Sept. 17, 1906. Serial No. 334,926.

1. In an engine in which air is compressed in the crank case, means for controlling and varying the volume of air delivered from the crank case to the engine cylinder with each alternate revolution of the crank shaft.

867,282. Steering Gear for Automobiles. Walter W. Macfarren, Pittsburg, Pa., assignor to Wm. H. Donner, Pittsburg, Pa. Filed March 9, 1907. Serial No. 361.623.

1. In a motor vehicle, the combination of four wheels, a fluid pressure supply, and means for steering either the front or rear wheels independently or simultaneously by the application of said fluid pressure.

867,285. Automobile Sleigh. Will.am C. Mielke, Parkers Prairie, Minn. Filed April 16, 1906. Serial No.

l. In a device of the class described, a body, a rear sled secured to the said body, a forward sled formed of a frame slidingly mounted relative to the said body, and provided with runners means for forcing the forward sled forwardly, and the body and rear sled forwardly while the forward sled is retained at its forward limit of movement a steering segment secured to the forward sled, and means for operating said segment.

867,324. Power Transmission Device. Edward P. Warner, Chicago, Ill., assignor, by mesne assignments, to Warner Clutch Company, a Corporation of Illinois. Filed Aug. 15, 1906. Serial No. 330,730.

1. A power transmission device comprising a power shaft; a driven shaft; a friction member connected to said driven shaft and means having a longitudinal reciprocal movement independent of said driving and driven members whereby it is adapted to engage said friction member commencing at one end of the same and advancing to the other end thereof.

867,419. Turbine Adapted for the Use of Combustible Gases at very High Temperatures. Charles Rollin, Newcastle upon-Tyne, England. Filed Jan. 16, 1907. Serial No. 352 612.

1. In gas turbines used for producing motion from the combustion of gas and air, the combination of an outer revolving structure or "rotor," consisting of refractory material, with an outer metallic casing, and an inner stationary structure or "stator" formed of refractory material.

867,551. Universal Joint Casing. Fred H. Bogart. Hartford, Conn., assignor to Hartford Automobile Parts Co., Hartford, Conn. Filed Oct. 15, 1906. Serial No. 338,-886

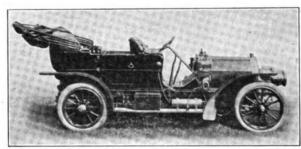
1. In a universal joint casing of the class described, an inclosing casing therefor comprising elements adapted to be secured to the bearing pieces of the joint, and having openings therethrough, there being cylindrically shaped surfaces at opposite sides of the same and located in planes at right angles to each other; said surfaces surrounding the openings thereof, and closure pieces also having cylindrically shaped surfaces and engaging the first mentioned cylindrically shaped surfaces, said closure pieces being detachably secured to the driving parts of the joint.

1908 Comobile

Combines Proved Reliability With Increased Efficiency Zand Low Cost of Up-Keep?

THE BEST WAY
TO FIND A GOOD
THING IS TO LOOK
FOR IT × WE HAVE
AFIND IN THE
AFIND IN THE
AURORA MOTOR WORKS
AURORA—ILLI-





\$2800

With Magneto, \$3000

Touring Car, Roadster, Touring Roadster, Limousine. Valve-in-head Motor, Chrome Nickel Steel, Annular Bearings.

Pennsylvania Auto Motor Co., Bryn Mawr, Pa.

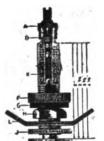
PENNSYLVANIA DISTRIBUTORS.

Los Angeles, Cal.—Greer-Robbins Company, 1501-1505 South Main St. San Francisco, Cal.—City Hall Automobile Company, 66 Fulton St. Boston, Mass.—Frederick E. Randall Company, 245 Columbus Ave. Chicago, Ill.—B. C. Hamilton, 1218-1220 Michigan Ave. Providence, R. L.—Pennsylvania Motor Car Agency, 133 Washington St. Denver, Col.—Denver Omnibus & Cab Company.

Kansas City, Mo.—Auto-Motor Company, 1122-1124 East 15th St. Pittsburg, Pa.—Bellefield Motor Company, 1122-1124 East 15th St. Brooklyn, N. Y.—Charles F. Batt, 1378 Bedford Ave. New York City—Archer & Company, 1597 Broadway. Spokane, Wash.—Dulmage-Rose Automobile Company, 1212 Second Ave. Philadelphia, Pa.—West-Stillman Motor Car Company, 153 No. Broad St. Baltimore, Md.—Rice's Garage, North & Madison Aves. St. Louis, Mo.—Lakedel Automobile Company, 5143 Delmar Boulevard. Buffalo, N. Y.—Brunn's Carriage Manufactory, 1140 Main St.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE



Trade Mark Registered April 30, 1895 SIMPLE AND ABSOLUTELY AIR TIGHT

¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York

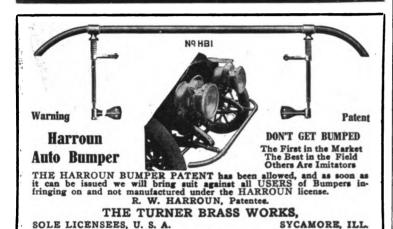


RELIABLE DAYTO MOTOR CAR

> "The First Real Successor to the Horse'

A thoroughly practical motor car for everyday service the year around. Embraces the proved principles of standard

Reliable Dayton Motor Car Co., Dept. 14, Chicago, Ill.



NEW YORK IS NOTED FOR MANY THINGS

one of them being the home of the famous



Splitdorf Coil

The reason SPLITDORF Ignition is used by the great majority of Motorists is because it is universally conceded to

Most Perfect Ignition Made

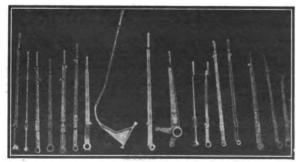
The name SPLITDORF on a coil is a guarantee of excellence.

C. F. SPLITDORF

Walton Ave. & 138th St.

NEW YORK

PARSONS' MANGANESE BRONZE LEVER CASTINGS



Sale Makers SHIP CRAMP & SONS ENCINE BUILDING COMPANY, Philadelphia, Penna.

The Largest Automobile Supply House in America

Your Profit, Mr. Dealer

depends upon your sales. You must sell goods that are in demand and move rapidly; and give you a good profit. We would like to have you investigate

The Celebrated **Brampton Chain**

They are rapid sellers and bring many duplicate orders.

They are rapid sellers and bring many duplicate orders. Every customer, a satisfied customer and a daily advertiser for you and the Brampton Chain. They are the strongest chain on the market. Made of self-hardening steel.

We have in stock all sizes to fit American and foreign cars. THE PRICE is the same as you pay for any other chain, in fact all automobile chains now on the market are same price to manufacturers, jobbers, dealers and users, and our prices are the same as quoted by chain manufacturers.

prices are the same as quoted by chain manufacturers.
PRICE THE SAME. QUALITY? INVESTIGATE.
Get the best at the same price. Agents wanted in unoccupied

1907 Catalog mailed upon request; the largest of its kind ever published.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 406 Erie St.

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 227 14-229 Jefferson Av. Buffalo, N. Y., 824 Main St.

RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



SENSATION

Equip your car with

Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

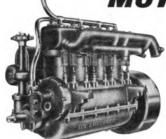
still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Co.

4555 Delmar Ave., St. Louis New York Branch, 52 West 67th Street



MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful ears, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind.
Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

KINWOOD AUTOMOBILE PARTS.

ONE QUALITY—THE REST.

OUR LEADERS:

Kinwood Perfection Radiators

Kinwood Mechanical Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc.

Large facilities and dependable deliveries.

K. FRANKLIN PETERSEN, 166 Lake St., Chloago, Wester Representative. THOMAS J. WETZEL,
II Warren St., New York,
Eastern Representative.

THE KINSEY MFQ. CO., Dayton, Ohio.

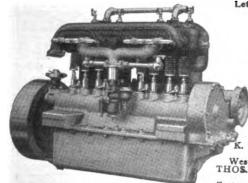
Triumph Grease

is a perfect lubricant, without gum, pitch, acids or any other non-lubricants. It will not freeze. It will not melt. Lasts 50 to 100 per cent. longer than other lubricants.

SEND \$2.00 FOR 10 POUND TRIAL CAN

The Perfection Grease Co., South Bend, Ind.

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908

THREE SIZES

4½ in. x 4½ in.
4½ in. x 5 in.
5 in. x 5 in.
4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.

ouping any standard magneto.

Our new factory and machinery enable us to guarantee quality and deliveries. Also clutches and transmissions. Send for catalogue.

catalogue. Send for catalogue. R. FRANKLIN PETERSON, 166 Lake St., Chicago, Ill. Western Representative. THOS. J. WETZEL, 29 W. 42d St., New York. Eastern Representative.

CONTINENTAL MOTOR MFG. CO.,

Muskegon, Mich.

PACKARD Enameled Ignition Cable



is the choice of the most discriminating buyers.

Our new MULTIPLE LOW TENSION CABLE is a new feature. It greatly improves the wiring of any multicylinder engine. Samples and prices on request.

THE PACKARD ELECTRIC CO.. Warren. O.

Handlest Auto Wrenches

A Set of 5 B. & S. General Service Wrenches (10 openings) put up in a handy KIT BAG

Get our last Catalog

The Billings & Spencer Company Hartford, Conn.

AUTOMOBILE BODIES



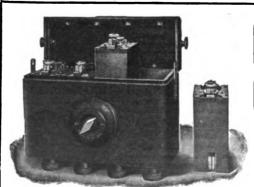
TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.



HEINZE COILS

Send for 1907 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

CIMIOTTI GARAGE

Now York City

Broadway and 110th St.

Run as a garage ought to be run. Personal attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try us.

Tel. 2686 River.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

Simple, effective, correctly designed Mahogany finish wood frame, trimmed in brass, 3-16 crystal plates, steel stay rods, bottom of frame shaped to dash of any standard automobile. Can be attached easily and quickly.

We make the London Tops. Write for details and prices.

LONDON AUTO SUPPLY CO.
1233 Michigan Avenue CHIC CHICAGO

BRISCOE RADIATORS

Honeycomb, Flat Tube, Round Tube, Staggered Tube, Film Tube; horizontal or vertical flow; with or without casing; with or without pump. Fenders, Tanks, Hoods also made. Send for catalog.

Old Radiators Repaired. Send to nearest factory.

BRISCOE MFG. CO. NEWARK, N. J. DETROIT, MICH.



The Baidwin Chain Company

— MAKE — Automobile Chains, Spreckets, Spur and Bevel Gears.

Baidwin Chain & Mfg. Co., Worcester, Mass , U.S.A.

Show

a Mitchell. Phone "that" to any Mitchell Agent and he'll take you out if you're interested in the best value for money outlay you ever saw in the automobile line. Mitchell cars sell themselves. Prove it. Ask for catalog 18.

MITCHELL MOTOR CAR CO., Racine, Wis.

Logan 1908 Model S Three Ton Truck

A truck equipped with a four cylinder water cooled 40 H. P. motor, built to give service month after month and year after year, and representing the best thought of the oldest and largest plant in America devoted to the manufacture of commercial motor cars. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE, OHIO.

THE CHANDLER

Name Plates and Stampings SPRINGFIELD. MASS.

EISEMANN-LAVALETTE **Magnetos**

LAVELETTE & CO., 112 W. 42d St., New York

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y.

STAMPED PARTS

FOR AUTOMOBILES THE CROSBY COMPANY Buffale, New Yerk



THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akren, Ohio

"Famous Apperson Cars" \$2750 to \$5000

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



"The Pullman of Motor Cars" 1908 Models Ready for Delivery RAINIER MOTOR CAR CO., Broadway and 50th St., New York

TRUFFAULT-HARTFORD SHOCK ABSORBER Mark

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.
Write for Rough Road Booklet to Department L. HARTFORD SUSPENSION CO..

66 Vestry St., New York E. V. Hartford, Pres.

Against wear and carbon troubles by using

INSURE YOUR MOTOR



TWO GRADES-LIGHT AND MEDIUM HEAVY

YOU NAME THE CAR—WE'LL NAME THE GRADE

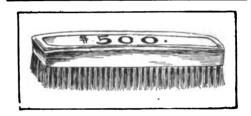
INVADER SEMI-FLUID COMPOUND

A thickened oil for transmissions

INVADER LUBRICATING COMPOUND

CHAS. F. KELLOM & CO.

128 Arch Street, PHILADELPHIA



THE LAMBERT 18 "Friction Flyer"

Write for catalogue describing our full line.

The Buckeye Mfg. Co.,

Anderson, Ind.

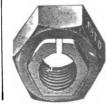


MICHELIN TIRE CO..

Militown, N. J.



For catalogues, address THE CONTINENTAL AUTO MFG. CO.



Nuts That Require Tightening After considerable use the bolts driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprockets out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts
COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Cenn.





\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Bex No. 250

AUBURN, IND.



"VULCAN" Sta-Rite Spark Plugs

"KEEPS THE LID ON."

On Maxwells, Mitchells, Autocars, Americans, Glides, etc., in their contests. They'll do the same for you.

Send for sample set.

THE R. E. HARDY CO., 86 Water St., New York City



Studebaker Automobile Co., South Bend, Indiana

DRAGON

Touring Car \$2 | 00

Roadster \$ 1850

TWO "HAPPY MEDIUM" CARS. Not too heavy—not too light, Not too costly—price just right.

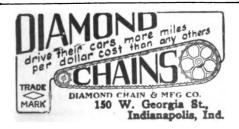
DRAGON AUTOMOBILE CO., 50th, 51st and Chestnut Sts., Philadelphia, Pa

Acetylene Gas and Oil ATWOOD MFC. CO., Amesbury, Mass.

Springfield Top (Pat. 1895) VERNINA Springfield Metal Body Bo.,

366 Birgio Avence,





SMITH AUTOMOBILE PARTS.



STEERING COLUMNS.

A. O. SMITH COMPANY

243 Clinton St.,

Milwaukee, Wis.

The Pioneer Makers of Automobile Parts.

A SUPERS LINE OF CARS-THE JACKSON
"No Sand Too Deep-No Hill Too Steep." 2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars. 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,000.

JACKSON AUTOMOBILE CO., Jackson, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STREL CO., Cleveland, Ohio.

1111 ALUMINUM BODIES J. M. QUINBY & CO. Carriage Builders.

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed

WITHERBEE IGNITER CO.,

541 West 434 St., New York

STANDARD BEARING COMPANY ROLLER

Manufacturers of Steel, Brass and Bronze Balls, Ball Bearings, Roller Bearings and Automobile Axles Write for New Automobile Catalogue with full par-ticulars of

THE STANDARD TRANSMISSION AXLE.



\$250 "SUCCESS' AUTOMOBILE

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy.
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Co., Inc. 531 De Balivere Ave., St. Louis, Me.

McCORD LUBRICATORS — RADIATORS

MCKIM COPPER-ASBESTOS CASKETS.

McCORD & COMPANY

NEW YORK OFFICE—24 Broad Street.
Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street. New York

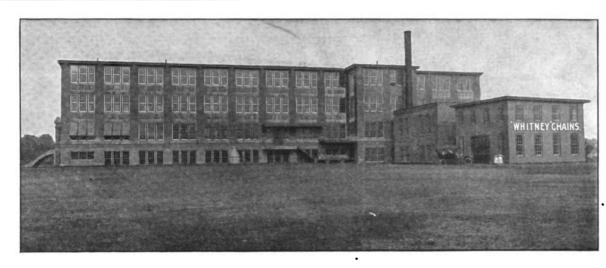
Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of

Address

Name_

Digitized by Google



We are now well settled in our

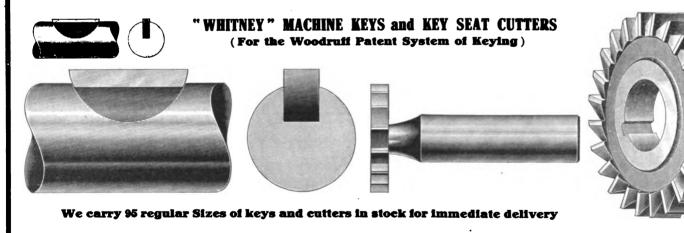
New Factory and

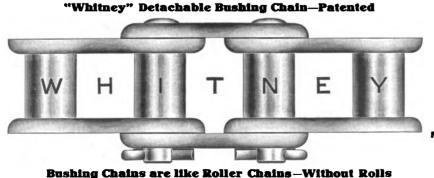
READY TO SHOW RESULTS

Prompt Delivery and Constant Improvement in Quality

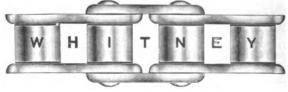
In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.



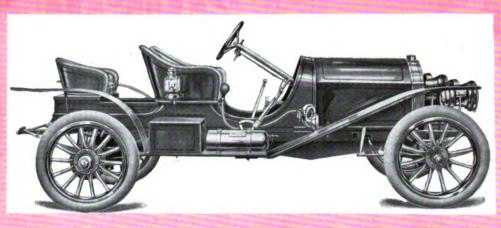


Roller Chain



The Whitney Mfg. Co.

Hartford, Conn.



The Roadster with **Get-There**

Qualities

tuddard=ABapi

Among gasoline cars no roadster ever dedicated to the motoring smart set has ever equalled records made by this rakish Stoddard-Dayton Model 8-K. It has won achievements that are of exclusive, unapproachable note. Looks like a racer, but is safe. Unequalled as a hill climber. Left all competitors behind in Rochester contest and the Box Springs Hill Climb in California.

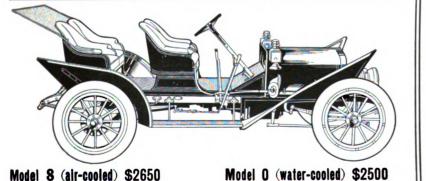
Stoddard-Dayton Model 8-K, Motor—Four vertical cylinders, cast in pairs, 43/4x5 inches. 40-45 H. I'. Transmission, selective sliding gear type, three speeds forward and reverse. Price \$2,500 F. O. B. Dayton. Extras: Magneto, \$200; Top, \$75. Send for 1908 Catalog.

THE DAYTON MOTOR CAR COMPANY, DAYTON, OHIO

btoddard=Warton

A NEW FULL-JEWELE





3 3 4

SEATS

The Corbin Motor Vehicle Corporation, New Britain Connecticut

Our 1908 Prediction

Pased on information from all sections, it is our belief and our prophecy that the volume of business to be done by the dealing trade during 1908 will be better than it was the past year.

There will be more cars in service than ever before. No machines will be laid up. If some people don't want to maintain their automobiles in operation, they will pass to others.

The demand for renewal equipment will be greater than ever and it is an extremely conservative estimate that the number of new cars to be provided for will be at least half the large number produced in 1907.

¶Unquestionably a more conservative policy in conducting the business of all branches of the trade will prevail. The accepted forms of regular merchandising will be in more common use by all concerned than in the past.

¶The accepted trend and the chief demand will be conspicuously in favor of high-grade goods—goods that will deliver the service making for the greatest ultimate economy and advancing the best interests of the automobile industry.

The best dealers everywhere will bend their efforts to the sale of <u>high-class</u> products; for it is preeminently the <u>wrong</u> time—if there ever <u>was</u> a <u>right</u> time—to sell <u>inferior</u> articles though on the initial sale there might be as much or <u>more</u> profit.

In tires it is the make that wears the longest and which guarantees a permanent and satisfied customer which is not only the cheapest but the most profitable in the end to all interested. The make of tire that does this is the **Diamond Tire**.

In rims it is the Marsh Rim.

The Diamond Rubber Company

Akron, Ohio

NEW YORK—1876 Broadway. CHICAGO—1523-31 Michigan Ave. PHILADELPHIA—304-306 N. Broad St. DETROIT—258 Jefferson Ave. ST. LOUIS—3963-5 Olive St CLEVELAND—1514 Euclid Ave. DENVER—1735 Arapahoe St. LOS ANGELES—1207-9 Main St. MINNEAPOLIS—503 Second Ave., S. OAKLAND—108-110-112 Telegraph Ave BUFFALO—715 Main St. BOSTON—174 Columbus Ave.

THOMAS 1908

A complete line of Motor Cars of the highest quality possible in Design, Material and Workmanship. They will do what you wish your car could do



PRICE, \$2,750

Thomas 4-20 Towncar

The original Towncar, designed for City and Suburban use exclusively. Beautiful bodies, quiet operation; low cost of maintenance. The Society Car.

Thomas 4-40 Detroit

Best of all shaft-drive cars. In power, speed, hill-climbing, and reliability the Thomas Detroit leads the five passenger class.

Thomas 4-60 Flyer

Winner of hundreds of contests of speed, hill-climbing, reliability, and endurance. Has more records than any American car. This year improved, enlarged, and refined.

Thomas 6-70 Special

The six-cylinder model of the Thomas Flyer, built by America's pioneer six-cylinder builders. The greatest car in America in speed, size, reliability and refinement.

Thomas Cars Succeed

E. R. THOMAS MOTOR COMPANY

Member A. L. A. M.

Buffalo.



Save \$100 or More in Tire Expense This Year

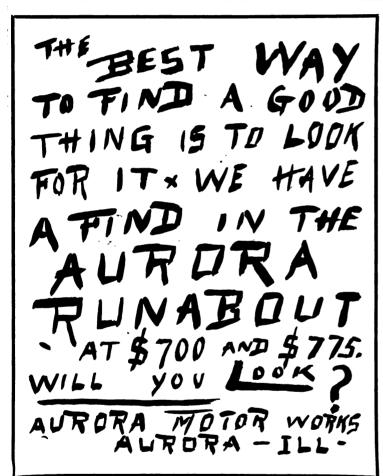
by specifying and getting

ORGAN & WRIGHT

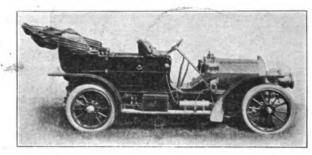
There are a number of "just as good" brands to be had, but it is next to impossible to find a user of Morgan & Wright tires who can be influenced to accept a substitute.

MORGAN & WRIGHT, Detroit

Branches, Agencies or Dealers Everywhere.







\$2800

With Magneto, \$3000

Touring Car, Roadster, Touring Roadster, Limousine. Valve-in-head Motor, Chrome Nickel Steel, Annular Bearings.

Pennsylvania Auto Motor Co., Bryn Mawr. Pa.

PENNSYLVANIA DISTRIBUTORS.

PENNSYLVANIA DISTRIBUTORS.

Los Angeles, Cal.—Greer-Robbins Company, 1501-1505 South Main St. San Francisco, Cal.—City Hall Automobile Company, 66 Fulton St. Boston, Mass.—Frederick E. Randall Company, 245 Columbus Ave. Chicago, Ill.—B. C. Hamilton, 1218-1220 Michigan Ave. Providence, R. I.—Pennsylvania Motor Car Agency, 133 Washington St. Denver, Col.—Denver Omnibus & Cab Company, Kansas City, Mo.—Auto-Motor Company, 1122-1124 East 15th St. Pittsburg, Pa.—Bellefield Motor Company, 4514-16-18 Henry St. Brooklyn, N. Y.—Charles F. Batt, 1378 Bedford Ave. New York City—Archer & Company, 1597 Broadway. Spokane, Wash.—Dulmage-Rose Automobile Company, 1212 Second Ave. Philadelphia, Pa.—West-Stillman Motor Car Company, 153 No. Broad St. Baltimore, Md.—Rice's Garage, North & Madison Aves. St. Louis, Mo.—Lakedel Automobile Company, 5143 Delmar Boulevard. Buffalo, N. Y.—Brunn's Carriage Manufactory, 1140 Main St.

1908 Ocomonile

Combines Proved Reliability With Increased Efficiency and Low Cost of Up-Keep

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



White Wins Quaker City Endurance Run

In the Endurance Run held January 1-2 by the Quaker City Motor Club, the White Steamer was the only car which made a perfect score on the road and also was declared by the Technical Committee to be in perfect condition at the finish. The Contest Committee would not abide by the decision of the Technical Committee. They gave credit for perfect scores to two other cars and ordered a "run-off."

The supplementary contest, held January 4th, served only to emphasize the superiority of the White. The examination then made by the Technical Committee placed the White far in the lead and, accordingly, the MacDonald & Campbell trophy was awarded to the White.

With our entry of one car, we decisively defeated 27 gasoline cars representing 23 different makes. Thus has another important factor been added to the long list of triumphs achieved by the White—the distinctively American car.

Write for Literature

THE WHITE COMPANY

CLEVELAND, OHIO



TO EQUIP WITH 1908

G&JIRES

means pleasure to the owner as well as perfect security in the knowledge that no better tires are Send for new Catalogue and Prices. made.

INDIANAPOLIS. IND.

BRANCHES:

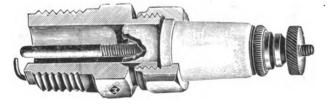
Detroit—247 Jefferson Ave.

New York—10 West Sixtieth St.
Denver, Col.—1528 Court Place.
Philadelphia—711 N. Broad St.
Minneapolis—21 S. Second St.
Pittsburg—913-915 Liberty Ave.
Syracuse, N. Y.—212-214 S. Clinton St.
Memphis, Tenn.—181-183 Madison St.
Boston, Mass.—110 Federal St.

Chicago—1434 Michigan Ave.
San Francisco—423-433 Golden Gate Ave.
Buffalo, N. Y.—912 Main St.
Omaha, Neb.—11th & Farnam Sts.
Atlanta, Ga.—55 N. Pryor St.
St. Louis, Mo.—415 N. Fourth St.
Portland, Ore.—80-82 Seventh St.

The Largest Automobile Supply House in America

The Miller Porcelain Spark Plug



There has been a constant demand for a first-class por-celain plug and we have arranged to manufacture this plug in large quantities and in this way we have reduced the cost of manufacturing the plug, and we offer one of the best spark plugs on the market at a low price. The material and workmanship are the finest on the market and are guaranteed. The list price is \$1.00 each.

Our catalog-the largest of its kind, mailed on request.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

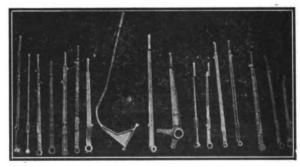
HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 406 Erie St.

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 227 1-229 Jefferson Av. Buffalo, N. Y., 824 Main St.

PARSONS' MANGANESE BRONZE LEVER CASTINGS



CRAMP & SONS SHIP & ENGINE Philadelphia, Penna. BUILDING COMPANY,





20 H. P .- \$1,450 fully equipped.

The Man Who Drives

knows what it is to experience all the pleasures of motoring without that eternal "gnawing at his bankroll" as is the case with a high-priced, costly-to-operate car.

The little overdose of prosperity which resulted in the recent stringency has waked a let of people to the fact that motor-car money's worth does not go hand in hand with fancy horse-power and exaggerated claims.

The "Maxwell" has never been a speed-car or a freak. It has never boasted hyper-horse-power.

It is, and has always been a utility—a necessity—a family car without a "frill" in its construction.

The records it has established in hill-climbs, economy and endurance tests have never been equalled by any other cars, regardless of price.

Mr. J. D. Maxwell's foresight in designing cars of unfailing efficiency, at prices well within the reach of the average citizen has been well rewarded, to judge from the universal satisfaction of the 10,000 "Maxwell" owners.

That is why these days are "Maxwell" days. Every motor-car buyer will now get a follar's worth of motor-car for every dollar he pays, and that is just what the "Maxwell" has always given.

Among the important features which the "Maxwell" was the first to introduce, are the three-point suspension, thermo-siphon cooling and multiple-disc clutch.

That features of such prime importance should have first appeared on cars of such low price—\$825 for the 14 H. P. Tourabout, \$1,450 for the 20 H. P. Touring Car, and \$1,750 for the new four-cylinder 24 H. P. Touring Car is one of the most remarkable incidents of the industry, and is evidence of how far in advance the "Maxwell"

Get a "Maxwell Convincer" at your convenience in any car of the "Maxwell" line. Address Dept. 2.

Dery Brisca Prosident.

Maxwell-Briscoe Motor Company

Members A. M. C. M. A. Main Office: 40 Mt. Pleasant St., Tarrytown, N. Y.

FACTORIES:

Chicago, Ill., Pawtucket, R. I., New Castle, Ind. DEALERS IN ALL LARGE CITIES



24 H. P. Touring Car, \$1,750.

The Car You Can Afford to Buy and Keep

is the Mitchell.

-Because it is moderate in price (\$1,000 to \$2,800).

-Just as stylish, handsome and well finished as any car.

-And is perfect in each detail of construction.

—Doing just as well on the road and standing up to wear and tear just as well as the extravagantly high-priced cars.

Know this for yourself, Mr. Business Man.

Get demonstrations of the high-priced cars.

Then form your opinion in a demonstration of the Mitchell.

The Mitchell agent will be glad to take you out for 50 or 100 miles any day.

Call him up-you are placed under no obligation.

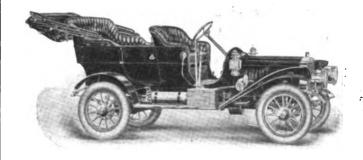


He'll answer with the car—show you a "silent argument" that will convince you.

Write for letters proving that the Mitchell is the most economical car to **operate**, and for cat-alog No. 18, picturing and describing the Mitchell Touring Car \$2,000, Limousine \$2,800, Roadster \$1,250 and Runabout \$1,000.

Touring Car shown here—5 passenger, 35 h. p., 4 cylinder, speed 50 miles, finished in Mitchell blue—a very neat and extremely desirable car from radiator to tail light.

Mitchell Motor Car Co., 278 Mitchell St., Racine, Wis.



MOTOR MAKERS



years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

picked as the best in the world,

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

Kinwood Perfection Radiators

Kinwood Mechanical Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings. ete., etc.

Large facilities and dependable deliveries.

K. FRANKLIN PETERSEN. 166 Lake St., Chicago, Western Repr

THOMAS J. WETZEL. I i Warren St., Now York, Eastern Repr

THE KINSEY MFG. CO., Dayton, Ohio.

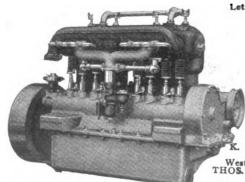
Triumph Grease

is a perfect lubricant, without gum, pitch, acids or any other non-lubricants. It will not It will not melt. Lasts 50 to 100 per cent. longer than other lubricants.

SEND \$2.00 FOR 10 POUND TRIAL CAN

The Perfection Grease Co.. South Bend. ind.

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908 THREE SIZES

4½ in. x 4½ in.

4½ in. x 5 in.

5 in. x 5 in.

5 in. x 5 in.

4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.

Our new factory and machinery enable us to guarantee quality and deliveries. Also clutches and transmissions. Send for catalogue. THREE SIZES

catalogue. PETERSON, 166 Lake St., Chicago, Ill. Western Representative. THOS. J. WETZEL, 29 W. 42d St., New York. Eastern Representative.

CONTINENTAL MOTOR MFG. CO.,

Muskegon, Mich.

PACKARD Enameled Ignition Cable

PACKARD CABLE

is the choice of the most discriminating buyers. Our new MULTIPLE LOW TENSION CABLE is a new feature. It greatly improves the wiring of any multicylinder engine. Samples and prices on request.

THE PACKARD ELECTRIC CO.. Warren, O.



Handiest Auto Wrenches

Wrenches
(10 openings) put
up in a handy
KIT BAG

Get our last Catalog

The Billings & Spencer Company Hartford, Conn.

AUTOMOBILE BODIES



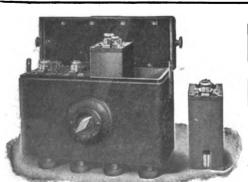
TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.



HEINZE

Send for 1907 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

One Price for Warner Auto-Meters

TEVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being ob-That was ourselves. But, unfortunately, we sold to the jobber also - and the jobber cut the price.

Then there was fun in the camp. That hurt us - it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that hurt the consumer, the dealer and ourselves. For the jobber knows no law.

> So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

> > THIS STAND IS POSITIVE.

Warner Instrument Co. 108 Wheeler Ave., Beloft, WIs.



Consider Solar Then Buy Solar

Consider that SOLAR LAMP and SOLAR GENERATORS have fewer parts than any other lamp rewer parts than any other lamp or generator produced—and that each part is of heavy drawn brass, riveted or screwed together—not soldered. And that each lamp is tested for accuracy of focus and every possible bit of light is util-ized. Buy SOLAR and your auto-mobile will be raised to the highmobile will be raised to the high-est state of efficiency as regards lighting equipment.
Write for catalogue, department

7, sent free upon request.

Badger Brass Manufacturing Co.

Two Factories

New York City

Kenosha, Wis.

55%

55%

of all the Exhibitors of both pleasure and commercial cars at the great Chicago Shows held in the Coliseum Annex, 1st Regiment Armory and Tattersalls 7th Regiment Armory are using

Timken Roller Bearings or Axles

When you consider the varied exhibits and large number of individual Exhibitors, this showing is most remarkable-yet it shows that more than half of them are of one mind, notwithstanding the fact that price is always secondary to quality with TIMKEN PRODUCTS.

In the great 3 day Chicago Reliability Run a HAYNES Car WITH WHEEL HUBS SEALED carried off the prize with a clean score. Some say a practical impossibility with bearings not of

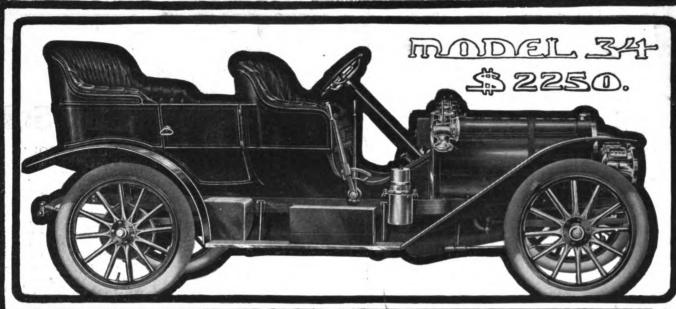
The Timken Principle and Quality

If you are not using TIMKEN PRODUCTS, write us—we have facts to present that not only mean profit but reputation to you.

> The Timken Roller Bearing Axle Company Canton, Ohio

Eastern Branch-10 E. 31st St., New York

Western Branch-429 Wabash Ave., Chicago





The Car of Steady Service

As a matter of business judgment examine the mechanical features of this car, such as offset crank shaft, straight line drive, direct from transmission gear to rear axle without an intervening joint, ball or roller bearings throughout the transmitting system, and powerful axle construction and other important details.

Then compare this car at \$2,250 with any other car at any price, and be guided by the keen consideration that you would give any other investment of equal moment. It is quality that counts and we offer all the practical value obtainable at any price.

price.

Let us show you; it may save you hundreds of dollars both in first investment and

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wis.

Chicago

Milwaukee

Branches and Distributing Agencies Boston

Philadelphia

San Francisco

Representatives in all leading cities.

Volume XVII.

New York, U. S. A., Thursday, January 9, 1908.

No. 15

BIG COMPANY'S NEW CONNECTIONS

Takes Output of Simplex Factory and Will

Market a Line Built to Its Own

Specifications.

Palmer & Singer Mfg. Co., of New York City, who for several years have taken the output of Matheson chassis, which contract was relinquished a short time ago, finally have completed re-arrangements which promise to put them in an even stronger and enlarged position in the trade.

As a leader, they have contracted to market the Simplex, which will be made in one model only-of 70 horsepower-listing at \$5,750. The Simplex was formerly made by the Smith & Mabley Mfg. Co., Inc., which was later succeeded by the Simplex Mfg. Co. The car itself has always been considered one of the best made and highest grade of American cars, being intended to be a duplicate of the best of the foreign product and incorporating the most advanced foreign mechanical practices. The car, however, was not pushed much beyond the confines of New York and Philadelphia, and, consequently, its worth throughout the country has not been generally known or appreciated. The Palmer & Singer Mfg. Co.'s agressiveness and forceful selling methods, together with their large resources, ought quickly to effect a marked change; in fact, Sales Manager W. M. Botto started this week on a trip to the Pacific Coast during which he will visit the principal cities en route in the interests of the company's new goods. Previous acquaintance with the territory will assist in facilitating his mission.

In addition to the Simplex, the Palmer & Singer company will handle a full line of cars which are to be known as "P & S", and which are being made expressly to their specifications; the line will include a six-cylinder runabout, a touring car and a town car. These P. & S. cars will be secondary to the Simplex in the matter of price only,

as Palmer & Singer have their own engineering staff and know the requisites of a high grade car.

Importers' Show Proved Unprofitable.

Despite its surpassing beauty and conspicuous and rose colored newspaper mention, the New York public refused to the end to "warm up" to the Importers' Salon which closed its run in Madison Square Garden, New York, on Saturday evening last. The attendance was meagre throughout. It is doubtful if there were more than 5,000 paid admissions during the eight days and it is practically certain that the entire attendance was less than 10,000. According to unofficial reports, the importers are facing a deficit of about \$10,000.

Burke to Manage Mora Branch.

Because of a desire to figure more largely in the metropolitan trade, the Mora Motor Car Co. has decided to establish a branch in New York City, probably at Fifty-second street and Broadway. W. W. Burke, former manager of the Electric Vehicle Co.'s New York branch, and latterly president of the Motor Parts Co., already has been engaged to manage the Mora depot.

Counselman Rejoins Chalmer's Staff.

Lee Counselman, who for seven years was in charge of the National Cash Register Co.'s publicity work, has become sales manager of the E. R. Thomas Detroit Co., thereby rejoining his former chief, Hugh Chalmers, who only recently became president of the Thomas Detroit company. Counselman has traveled far and has owned no less than ten different automobiles.

To Push Continentals in California.

E. L. De Camp, formerly with the New York office of the Packard Motor Car Co., has relinquished that position to take charge of the Continental Tire interests on the Pacific coast as general western representative. He will establish his headquarters at San Francisco.

NEXT A. L. A. M. SHOW IN JANUARY

Decision Reached at a "Forceful but Temperate" Meeting at Which There Was "Something Doing."

What one of those in attendance described as "a forceful but temperate" meeting of the Association of Licensed Automobile Manufacturers occurred in the New York offices of the organization on Tuesday last, 7th inst.

The one item of news for general consumption that grew out of the meeting was the announcement that the next A. L. A. M. show in Madison Square Garden will occur in January, 1909. That the trade had had more than enough of the socalled "early shows" and that this decision to return to January dates was more than probable was stated by the Motor World immediately after the November exhibition. Col. George Pope, as chairman of the show committee, rendered a report of the latter function. It was not the final report, but it stated that when everything is settled. a profit of at least \$10,000 more than the previous show will be disclosed.

The consideration of show matters was not, however, wholly responsible for the morning session that was prolonged until nearly 3 o'clock p. m., nor for the night session that followed. It had been whispered that there were those members who considered that the association was being too expensively maintained and who also were of opinion that a reduction of the royalty exacted under the Selden patent was desirable and possible; and that these members aired their views and that it was due to the discussion of those subjects that the meeting was so prolonged and forceful there is no doubt. Naturally the proceedings were of an executive character, but it is known that the matter of royalty reduction was referred to the executive committee of the association, who are to take up the subject with the receivers of the

Electric Vehicle Co., the owners of the Selden patent, who receive three-fifths of 11/4 per cent. royalty that is paid by the members. As the Electric Vehicle Co. now

is in the hands of the court, it would appear that any steps that may be taken of necessity will be unusually complicated.

It is also understood that interest was added to the occasion by the efforts of one of the eastern members to have himself placed on the executive committee.

The meeting also accepted two resignations that were tendered-those of Marcus I. Brock, assistant general manager, and C. A. Wardle, head of the agency depart-

The gathering was unusually well attended, those present being as follows: W. F. Clarke, Autocar Co.; William E. Metzger, Cadillac Motor Car Co.; H. S. Hart, Corbin Motor Vehicle Co.; H. S. Lloyd, Electric Vehicle Co.; B. A. Baker, Elmore Mfg. Co.; H. H. Franklin, H. H. Franklin Mfg. Co.; C. H. Haynes, Haynes Automobile Co.; E. R. Hewitt, Hewitt Motor Co.; E. H. Cutler, Knox Automobile Co.; S. T. Davis, Jr., Locomobile Company of America; H. A. Lozier, Lozier Motor Co.; C. W. Matheson, Matheson Motor Car Co.; V. M. Gunderson, Northern Motor Car Co.; F. L. Smith, Olds Motor Works; H. B. Joy, Packard Motor Car Co.; L. H. Kittredge. Peerless Motor Car Co.; Charles Clifton, George N. Pierce Co.; A. L. Pope, Pope Mfg. Co.; George Pope, Pope Motor Car Co.; E. D. Shurmer, Royal Motor Car Co.; G. E. Mitchell, Alden Sampson, 2d; R. H. Salmons, Selden Motor Vehicle Co.; E. McEwen, F. B. Stearns Co.; C. C. Hildebrand, Stevens-Duryea Co.; Hayden Eames, Studebaker Automobile Co.; E. C. Morse, E. R. Thomas Motor Co.; E. P. Chalfont, Waltham Mfg. Co.; Thomas Henderson, Winton Motor Carriage Co., and M. J. Budlong, general manager.

Chicago, too, Abandons Early Show Idea.

Chicago also has had enough of "early shows," and as a result the Windy City will return to the old order of things, which means that the next show there will occur during the first week in February, 1909. The show subject was brought up at the meeting of the executive committee of the National Association of Automobile Manufacturers in New York yesterday and was immediately disposed of by being referred to the show committee, which later agreed to recommend that the next Chicago show be held two weeks after the exhibition in Madison Square Garden, New York. H. E. Coffin, representing the E. R. Thomas Detroit Co., was elected a member, being the first to pay the new initiation fee of \$500.

At the request of the American Automobile Association, S. D. Waldon and Windsor T. White were appointed to represent the N. A. A. M. in an advisory capacity, and these two, with H. O. Smith, were appointed a committee to attend the meeting of the Λ , Λ . A. touring board.

BASIC CLAIM FOR WIRE ANTI-SKIDS

New York Inventor Unearths Ten Years' Old Patent and "Gets Busy"-Goodrich Takes Out License.

What is claimed to be the basic patent on wire tread, anti-skid tires has been brought to light by the inventor, Calvin Thayer Adams, of New York. It is numbered 609,320, and was issued August 16, 1898, the application having been filed December 26, 1895, and Adams, through his attorney, Alfred Wilkinson, already has been successful in having his patent recognized by the B. F. Goodrich Co., to whom a license just has been granted. Mr. Wilkinson promises that suits now will be promptly instituted against all infringers.

In his patent Adams claims as his invention "the combination, with a cushioned vehicle tire, of a tread applied to the entire periphery of the tire, and having metallic wire interwoven with itself, parts of said interwoven wire lying substantially flush with the outer surface of the tread, and forming cushioned antislip bearings covering the sides and bottom of the tread."

"To apply my invention to an ordinary rubber pneumatic tire,"-to quote the languare of the patent-"I prefer to employ a separate tread composed of a strip of rubber fabric or other appropriate material, which I provide with a peripheral succession of hard metallic bearings by, in this example of my invention, weaving or stitching therethrough copper, iron, or other suitable metallic wire in lines running lengthwise of the tread, so as to lie partly on the surface of the strip and substantially flush with the surface thereof. I then stretch and cement the strip thus fitted around the tire, so that it will be integrally united and incorporated therewith. The exposed portions of the interwoven wire will thus form hard bearings, which will bear on the roadway and effectually prevent the wheel from slipping thereon when the roadway is wet and at the same time will spring inward with the tire to allow the vielding material of the tread to bear on the roadway and act as a cushion in the ordinary way. The wire being interwoven with the material of the tread, will remain securely therein even when exposed statches are worn off, and the exposed ends of the wire will act in the same way as hard bearings to prevent the wheel from slipping."

No Schwab Offer for Pope-Toledo.

Associated Press dispatches from Toledo stating that after "a stormy session between the receivers of the Pope Motor Car Co. on one side, and the creditors and local business men on the other, the receivers agreed to grant Joseph M. Schwab an option on the Pope-Toledo plant," are branded by

those in position to know as "absolutely false."

The Schwab alleged proposal was reported by the Motor World several weeks ago and has been "in the air" ever since. At that time the Pope people stated that Mr. Schwab never had made a definite offer for the Pope-Toledo plant, but instead had made merely a verbal proposal through a third party and, of course, receivers cannot submit verbal offers to the courts for approval. Far from refusing Schwab an option on the property, the Pope interests say that without money consideration of any sort, they gave him a ten day option, which later was extended to thirty days. Not even the color of the Schwab money has yet been seen.

The Toledo press despatches add interest to the situation by stating that "it is freely asserted here that Joseph Schwab is simply standing with or back of his brother, Charles M., in this deal and that Charles wants the property for the United States Steel Trust, who desire to have a high grade automobile to compete with a steel competitor which is also making automobiles," which seems a most unlikely situation.

"Spring Opening" for New York Trade.

That the metropolitan automobile dealers are not going into ecstacies over the spring show which those two generous oil prospectors, Messrs. Curry and Tatham, have arranged for them, was made evident at the special meeting yesterday of the New York Automobile Trade Association, when instead of a Curry-Tatham show they considered the project of holding an "Opening Week" or "Automobile Week" in the early spring. After some discussion Gen. John T. Cutting introduced a resolution that it was the sense of the meeting that an "Opening Week" or "Automobile Week" be held under the auspices of the Trade Association during the early spring. A number of those present gave their views on the subject and President Owen appointed a committee to work out the details. Gen. Cutting was appointed chairman, the other members of the committee being Col. K. C. Pardee, Richard Newton, C. R. Teaboldt, and C. W. Wurster, with E. V. Stratton, secretary of the association, secretary.

To Operate the Deere-Clarke Plant.

For the stated purpose of marketing unfinished and finished product and ultimately re-establishing the business, the Midland Motor Co. has been formed to operate the plant of defunct Deere-Clarke Motor Car Co., at East Moline, Ill. The company was incorporated last week, under Illinois laws, with \$100,000 capital, the incorporators being C. H. Pope, A. E. Montgomery, C. E. White, William Butterworth and E. H. Guyer. The property of the defunct Deere-Clarke company, which was thrown into involuntary bankruptcy last September, was purchased on November 1st by representatives of the corporation formed last week.

EXPORTS FELL OFF IN NOVEMBER

But the United Kingdom and France Increased Their Purchases - Losses in Nine Geographical Divisions.

Exports in November failed to keep the pace set by the previous months and the record shows a decrease from the corresponding month of the previous year, the totals for complete machines and parts being \$173,552 as against \$275,759 during November, 1906.

The number of complete cars shipped was correspondingly less, too, being 99 as against 173. As for the past three years, the United Kingdom continues to be the greatest export market for American machines and the constant increase in its purchases goes on unabated, the November figures being \$49,419 as against \$45,076 in the previous November. France also shows its usual monthly gain, the exports to that country being \$26,304 as against \$18,712. The division known as Other Asia and Oceania jumps to \$13,648 from \$8,643. Germany and South America were the only other divisions showing gains, the remaining nine returning decreases for the month. Of the latter the most conspicuous is that of British Australasia, with a fall to \$4,439 from \$40,640. Mexico's decline for the corresponding months was down to \$15,662 from \$64,827.

For the eleven months ending with November the total shows a gain of \$1,268,508 in export business over 1906, the number of complete machines for the period in 1907 being 2,721. All of the divisions except Mexico and Africa show a gain. Despite its decrease, however, the big volume of business done gives Mexico the fourth position. First position in volume of sales goes to the United Kingdom, with British North America and France running second and third, respectively.

The record in detail is as follows:

Cars, carriages, other vehicles, and

parts of:-Automobiles, and parts of...... \$2,499,010 *\$2,356,110 Automobiles † \$230,491 \$142,946 1,610,426 \$4,861,622 . . *.* . . . Parts of 30,606 200,496 593,918 45,268 Exported to-1,671,680 587,886 170,186 242,660 272,290 1,145,564 573,116 249,637 49,419 26,304 6,136 631,787 1,110,617 United Kingdom 45,076 18,712 3,991 262,058 305,506 128,181 France 103,806 Germany 159,905 238,902 ItalyOther Europe 1,330 315 241,258 4,616 20,585 207,196 847,272 513,761 162,780 32,241 64,827 British North America 15,662 13,633 678,280 Mexico West Indies and Bermuda 131,361 230,187 22,353 220,933 35,556 175,356 5,910 6,606 31,097 32 832 111,119 60,878 British Australasia 40,640 4,439 147,116 72,443 16,100 13,648 91,162 Other Asia and Oceania 8,643

November

1906

1907

Total automobiles, and parts of .. \$275,759 \$173,552 \$2,499,010 \$4,167,032 \$5,455,540

* Figures are for six months, January to June, 1906. † Number not stated prior to July 1, 1906.

Other countries

Africa ...

Engineers Elect Fay President.

Thomas J. Fav. of New York City, succeeded A. L. Riker as president of the Society of Automobile Engineers, at the third annual meeting and election of officers, held in New York Friday last, 3d inst. E. T. Birdsall, Rochester, N. Y., was elected second vice-president, and Henry Hess, Philadelphia, treasurer. President Fay appointed Charles B. Hayward, secretary. Russell Huff, Detroit, and F. J. Newman, Chicago, were elected managers for three years, succeeding A. H. Whiting and H. Vanderbeek, whose terms had expired. The other officers are Henry Ford, of Detroit, first vice-president, and Hiram Percy Maxim, L. T. Gibbs, H. M. Swetland, and H. E. Alden, managers.

After the election, papers were read as follows: "Automobile Hub Bearings," by Henry Hess; "Some Notes on Taper Roller Bearings," by H. W. Alden; "Usually Unobserved Refinements of Automobile Construction," by J. M. Ellsworth and Thomas J. Fay; and "Nature Hard Gears," by Thomas J. Fay. The annual dinner was held in the evening, followed by a second business session. It was decided to hold quarterly meetings hereafter, the first being scheduled for the week of the Boston show, which will open in Mechanics Building and Horticultural Hall on Saturday, March 7th.

Mensus Wooing Houston Capitalists.

A. C. Mensus, of the unidentified Mensus Motor Co., Grand Rapids, Mich., is looking for a site for an automobile factory. He was first heard of a long way from homein Houston, Texas, where he was seeking the support of the Business Men's League.

Tincher Joins the A. M. C. M. A.

The Tincher Motor Car Co., of South Bend, Ind., has been elected to membership in the American Motor Car Manufacturers' Association. This accession makes the fifty-second name on the association's roll.

1905

33,528

3,116

109

66

Eleven Months Ending November

1906

7.733

11,466

SUDDEN DEATH OF M. L. GOSS

Unexpected Outcome of Apparently Slight Accident-His Long Continued Prominence in the Industry.

What were supposed to be slight injuries, caused by a trivial accident several days before, caused the death on Friday last, 3d inst., of M. L. Goss, secretary of the Baker Motor Vehicle Co., Cleveland, Ohio, and one of the most widely known men in the industry.

On the previous Monday evening, while driving to his home, Mr. Goss's hat blew off He got out of his car to recover it and in doing so was knocked down by another automobile. The fall was not violent, however, and he picked up his hat and drove home, apparently none the worse for the mishap. He was a portly man, however, and alarming complications set in on Thursday and caused his death the following night.

Mr. Goss had been secretary of the Baker Motor Vehicle Co. since its organization. He was in his fifty-ninth year and had lived in Cleveland most of the time since 1871, when he started in the employ of the Howe Sewing Machine Co. In 1879 he went to the White Sewing Machine Co., and later became its secretary, holding that position until 1893. In the middle nineties Mr. Goss was sales manager for H. A. Lozier & Co., in the wholesaling of bicycles at Cleveland, later spending some time with the Keating Bicycle Co., at Middletown, Conn. As the automobile industry grew Mr. Goss took up the electric vehicle and has remained a prominent factor in the Baker company and in the business. He served several terms as a member of the executive committee of the National Association of Automobile Manufacturers.

Personally, Mr. Goss was of the most genial temperament and was will liked by all who knew him even passingly well. To his intimates he was long and affectionately known as "Pop" Goss. He leaves a widow and a son and daughter. His funeral occurred on Monday, 6th inst., the interment being made in Lake View Cemetery, Cleve-

Empire Making Insulated Wire.

In addition to tires and tubes, the Empire Automobile Tire Co., Trenton, N. J., has added insulated wire to its productions. The cable of the Empire secondary wire is covered with a rubber stock designed to resist high voltage and to withstand great abuse. The rubber stock is covered with braid, and over this braid is placed a rubber stock that is absolutely oil-proof. Two braided jack ets are placed on the outside. The Empire primary wire is also insulated with oilproof rubber, and finished with two braided



50 PER CENT.



More Cars Were Fitted With

MIDGLEY Universal Rims

DETROIT SHOW

than with any other make

5 competing types on exhibition

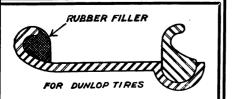
The simplicity of the MIDGLEY UNI-VERSAL RIM has made it predominant. It has only two parts, all other types have four or more.

USED EXCLUSIVELY BY

THE HARTFORD RUBBER WORKS CO.

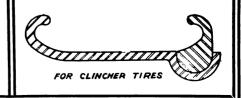
MORGAN & WRIGHT

G & J TIRE CO.



SOLE MANUFACTURERS

The Midgley Mig. Co.
Columbus, Ohio





Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. R. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

LTChange of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JANUARY 9, 1908

To Minimize Existing Evils.

It is good that His Honor the Mayor should have seen fit to devote a portion of his annual presentment to the board of aldermen to the question of the several abuses to which the motor car is commonly loaned in the City of New York. It is to be hoped, moreover, that that august body will profit by the hint and take sane action looking toward the mitigation of each of the evils mentioned. It is more than a year since the Automobile Club of America undertook its campaign of betterment in these branches of automobile useage, and since the efforts thus expended have been only partially rewarded, it is high time more drastic measures were taken to reduce the nuisance which is fast becoming unendurable in some respects.

Thus far, the efforts of the Automobile Club have been rewarded to the extent of establishing a fine line of demarcation between the considerate and inconsiderate motorist. Hence the establishment of local measures preventing the use of the sirens within city limits, as well as the restriction of smoky exhausts, muffler cutouts and acetylene headlights can in no way be considered as an attack upon motorists as a class, but only upon those who are not alive to the objectionable nature of such practices. They cannot in any way be regarded in the light of a general hardship. European municipalities already have found it necessary to establish such regulations and they are accepted without question and enforced without difficulty. Like the speed laws, they do not hamper the legitimate use of the automobile, nor question its value as a vehicle.

As for the recommendations of special license restrictions for such of the motor vehicles as are in the public service, it is only fair to the public that such vehicles shall be under municipal control to a certain extent. The danger of too restrictive action in this respect is, of course, imminent, considering the proclivities of aldermanic bodies as a class. But there is always the opportunity of obtaining court judgment on the rectitude of any such measure, and its absence is rather more a menace to the 'bus or cab promoter than too stringent a measure would be, since it always leaves the door open for unscrupulous traffic warfare and the reckless promulgation of impossible schemes. Altogether it is to be hoped the aldermen will listen to the whole of the Mayor's advise and act upon it with all the wisdom they possess.

Promoting Efficiency of Employes.

In the "breakdown" competition recently held by a French firm operating a large number of motor cabs, is a suggestion which promises a great deal in the way of improved operating efficiency on the part of the employes. In the growing use of the taximeter cab and the commercial car of one sort or another, is found a condition which has been thrashed out over and over again in other lines of activity with varying degrees of success. It is not enough to offer work and wages to the employe and to hedge him about with restrictions of one sort or another. His interest in his work must be kept up, either through pride in his calling or through his ambition, or untidy and slipshod work is the result, with perfunctory attention to details and unfaithful service in other ways. Like the sagacious physician of the old school, the successful manager of men must administer candy and pills according to the temper of the patient quite as much as with regard to the nature of the complaint. And the administering of this moral physic to the employe is quite the most arduous and difficult task which the superintendent and his lieutenants have to face.

Unlike the motorman of the trolley car. the automobile driver must be thrown upon his own responsibility as regards keeping his machine running, once he has left the garage, and unless the mishap involves some vital portion of the machine, no "breakdown" must be permitted to interfere with the mileage account turned in at the end of the day. It is customary to give the prospective driver of the commercial vehicle as much information and training as will enable him to operate his machine under placid conditions, and as much more relating to emergencies as he is able to absorb in a few hurried lessons. Generally his training ends at that point, and unless he be ambitious, his commercial career is apt to be limited by those conditions. How then to show that type of man the possibilities for advancement within his own sphere and reveal to him a field for useful and well paid labor without skipping over to the idle and generally fruitless existence of the "choffer," is something many managers would like to know.

In the methods and details of diagnosing motor troubles appears to be a good point about which to hinge a system of training which would be both useful to the vehicle owner and interesting to the men. Competitions of the sort indicated require little effort or expense to maintain. They would serve to keep the operators thinking about the mechanical side of their work, and would prove invaluable in the way of training if properly carried out. Supplementing such tests, it might be possible to arrange a system of prizes or bonuses for the drivers who obtained the greatest mileage from their vehicles without submitting them to the repair department, or who succeeded in making the most rapid and expedient roadside repairs consistent with economical vehicle maintenance. Such a method or methods could not be carried on for any length of time without developing substantial rewards for the successful ones in the way of promotion or increased pay, and consequently, the proven result of successful competition would tend to popularize the

system. Certainly the idea holds promise and is worth following up.

Worth of the Dynamometer.

It is a source of considerable local pride that the Automobile Club of America has at length set up its long promised car dynamometer and given able demonstration of its capabilities. That it is both original and complete in its construction should further increase the satisfaction felt in its culmination. When first announced, some three years ago, it was stated that the matter of its construction had been placed in the hands of the technical committee. Since that time, however, little has been heard of it, and its development has proceeded without any blare of trumpets to herald it. Therefore its completion and demonstration come very much as a surprise to most of those who are outside the range of the gossip of the club.

It cannot be questioned that the testing plant officially put into service on Tuesday afternoon is a useful and effective one and that by its operation it will be possible not alone for the owner club members to arrive at certain information concerning their cars which hitherto has been a matter of doubt and conjecture, but also that research work can be carried on to an extent which has not been possible hitherto because of the lack of complete apparatus. Here can be developed not only the figurative "horsepower-at-the-wheels" which has cut more or less of a caper at the show booths, but also the efficiency of the transmission mechanism, the holding power of the brakes in both directions, and other indirect investigations in which the power elements is in any way considered. As these experiments may be carried on without any special preparation of the machine, it being necessary merely to run it on the rollers, make it fast and connect up the exhaust, it is evident that the inducement to close study of the questions involved in the power equation of the car is very greatly stimulated by the development of this machine.

It has been deplored again and again, that no American body possessed the facilities offered by the laboratories of the Automobile Club of France, or the Royal Automobile Club of England. This hindrance to general advancement now being removed it remains only to put the plant to proper and effective use. It is not to be supposed that an investment as great as this is said

to be will be permitted to go to waste. At the same time it may be pardonable to express the hope that the use of the plant will not be confined at all closely to club members and their cars, and that the service fee be in no wise prohibitive, in the event of the plant being placed at the disposal of the public. The free and general use of such an apparatus cannot be regarded in any other light than as a public benefaction, especially when applied to an industry which is admittedly prey to so much chicanery as this. Hence it is to be hoped that the liberality evinced by the club in installing its testing plant will be extended speedily to the encouragement of proper and well ordered use of this excellent de-

Concerning the "Composite Car."

In its annual review of the closing year that venerable authority, the Scientific American discusses the progress of automobile design in optimistic vein, calling attention to the small and decreasing number of novelties which have made their appearance during the year as an indication that the approximate final type of design has been arrived at. The composite type automobile at the close of the year 1907 is described as having "a pressed steel riveted frame; a 40 horsepower, 6 cylinder engine; magneto ignition, with the jump spark in reserve; is water-cooled, with its pump driven by gears from the engine shaft; has a three or four speed sliding gear of the selective type; a cone clutch, or if not this, one of the floating disc or ring type; and the car body will be distinguished by straight lines and a general simplicity and purity of outline and coloring."

As a matter of fact, a census of the American product, taken by comparing 322 models catalogued by our own manufacturers, shows only 39 6-cylinder cars actually for sale, counting the different models produced by various makers as separate cars for the sake of comparison. This is a representation of a little over 12 per cent., while the total of 4-cylinder models amounts to near-66 per cent., double and single cylinder types coming to 16 and 4 per cent. nearly, in the respective cases. England, even, as being the home of the 6-cylinder movement as a significant manufacturing effort, fails to make a much better showing for this type. For even counting all the cars listed in the British market, only 18 per cent. are found to have 6-cylinder motors, while 65

COMING. EVENTS

January 14-18, Hartford, Conn.—Hartford Automobile Dealers' Association show in Foot Guard Armory Hall.

February 1-8, Providence, R. I -Show in Providence State armory.

February 10-15. Detroit, Mich.—Tri State Automobile and Sporting Goods Association's annual show in Light Guard armory.

February 17-22, Cleveland Ohio—Cleveland Automobile Dealers' Association show in Central armory.

per cent. are of the quadruple type, 12 per cent. double, and 3 per cent. single.

This is a catalogue census pure and simple, but as specifications drawn from the most improved cars existant at the close of 1907, must necessarily relate to 1908 cars almost entirely, judgment on the basis of sales is impossible. Even on that basis, however, the fairly built composite car should be of the 4-cylinder type. Conclusions of this sort are useless unless compiled with regard to average practice rather than with regard to what may be called "best engineering" at the time.

Yonkers, N. Y., affords a fair illustration of the inconsistency of which automobilists have a right to complain. Although previous wildcat races had resulted in several near-tragedies and though formal protest had been lodged with the mayor and the chief of police, those worthies were on the list to serve as officials of the dangerous and unauthorized midnight race of motorcyclists who tore through Yonkers at an unholy pace of 40 or 50 miles per hour, in the darkness of the New Year. Automobilists who have chanced to pass through the place in the safe hours of daylight at less than half that speed, have been pounced upon and haled to jail. It would serve a good purpose if such officials were called to account for such connivance at law breaking and such miserable inconsistency.

It is evident that we are now due for an epidemic of taxicab companies: The number of them that are forming is becoming formidable. It is safe to say, however, that of those who "take out their papers," the number that actually will operate cabs on the street will be insignificant. There are some honest, hopeful souls who appear to imagine that a taxicab service is analagous to the keeping of a livery stable.

THREE CARS TIED A SECOND TIME

Result of Philadelphia Endurance Run Decided by Technical Process—Trophy

Awarded to Sheridan.

Hal. K. Sheridan of Philadelphia will hold the MacDonald and Campbell trophy for one year. The judges in the Quaker City Motor Club's two-days endurance run from Philadelphia to Allentown and return, Wednesday and Thursday, 1st and 2d insts., have ruled that he won the contest. As a result, not every one is happy.

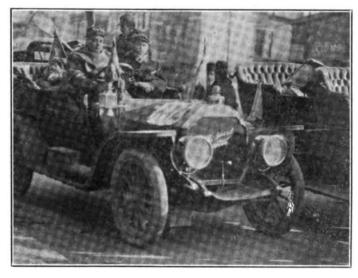
When the run finished on Thursday three cars were found to have clean scores in the

from the club, and challenges from the Studebaker representatives to Sheridan, the driver of the winnig White, have been flying thick and fast, while Sheridan has retorted that the Studebaker man may be sorry he challenged if the technical committee's report is made public. As chairman of the contest committee, E. C. Johnson has been placed in a position that he would rather not be in, as unfortunately he happens to be the Philadelphia representative of the White.

When the cars started on their return journey from Allentown Thursday morning, six touring cars and two runabouts had no marks against them so far as could be determined. Three of the former and one runabout lost marks before Philadelscore as it previously had been decided that no penalizations should be imposed on accessories, such as tires, lamps, speedometer, shock absorbers, tops, clocks, odometers, and so forth. The committee assessed ten points against Maucher's Peerless, claiming they found the transmission loose, but the driver protested, and as the required fee accompanied it, the committee was obliged to consider the protest. Maucher claimed that all Peerless cars are made with transmissions slightly loose. After a thorough examination of five brand new cars, the transmissions of which were found to be the same as in Maucher's car. the ten demerits were cancelled and his clean score restored. John Trumbull's Packard was the only car that could pro-



HAL. SHRRIDAN, WINNER OF THE TROPHY



ROBERT SHIRK, ONE OF THE BROOM BRIGARE

touring car class. These were Sheridan's White, Bert Maucher's Peerless, and Frank Yerger's Studebaker. Exercising its prerogative to make the three cars run the contest over in an effort to break the existing tie, the contest committee made the cars follow the same course on Saturday. 4th inst., as in the original contest, except that they were required to cover the 172.6 miles from Philadelphia and Allentown and return in one day instead of in two. The tie remained unbroken when the cars finished and then the technical committee got busy with the result that Sheridan was awarded the trophy, with Maucher second and Yerger third. The final findings of the technical committee have not been made public, but the demerits suffered by the two losing cars were of a minor nature, the Peerless having lost a hood catch and a small spring on the brake-band. John Trumbull, who drove a Packard, was the only car in the high powered runabout class to finish with a pecfect score, and the Maxwell won the light runabout trophy with 51 points against it.

As a result of the decision the Philadelphia motor colony has lost its usual placid quietude. It has caused one member, who was interested in the Peerless, to resign phia was sighted in the afternoon. Frozen roads and bad water breaks on the roads between Allentown and Kutztown, the first control, caused many cars to have demerits checked against them, but from Kutztown to Philadelphia the going was easy. There were no incidents worth recording, except that in Reading the police kept the streets clear for the contestants, in striking contrast to the arrests made in that city when the endurance run passed through it last year.

When Philadelphia was reached the real work of the officials began. The technical committee's function was to examine all the contesting cars and report to the contest committee any defects or breakages found upon those cars after the run was finished. The report was made to the latter committee and passed upon before the identity of the particular car under investigation was made known, so that the decisions were manifestly fair to all concerned in the matter.

The committee found that with the exception of two bolts missing from the right shock absorber on the Studebaker, that car had no points against it, and although Sheridan, driver of the White, prot sted, the committee had to allow Yerger a clean

duce a clean sheet in the high powered runabout division.

This gave three cars with perfect scores for the MacDonald and Campbell trophy for touring cars and as the committee could see no other way of disposing of the tie it ordered Sheridan, Maucher and Yerger to again cover the course, this time in one day, under otherwise the same conditions that governed the original run. The trio set out Saturday morning and kept within sight of each other all the way, finishing on exactly schedule time, one minute apart, in Philadelphia Saturday afternoon. As the tie still remained unbroken the technical committee made a critical examination of the three cars and reported to the contest committee, which decided in favor of Sheridan for first place, Maucher for second and Yerger for third.

The prize for light runabouts was awarded to the Maxwell Company's Maxwell, which had 51 points against it. W. H. Cram's Mitchell was second with a deduction of 62 points. These were the only two cars that finished, and unlike those in the other divisions, had only to check out in the morning and in at night. A prize also was awarded in the "go as-you-please" division, which as its name implies, was



YERGER (STUDEBAKER), LEAVING ALLENTOWN.

for those who wished to accompany the run, and not be bound by schedule or regulations. The winner was determined by a vote for the most popular driver and Daniel Webster, a Vanderbilt cup race driver, won by an overwhelming nuber of ballots.

After the run, there was quite a demand for brooms, which were carried aloft and which were supposed to represent a "clean sweep." There were so many brooms displayed, however, that the Philadelphia public may be pardoned if it was confused and unable to decide exactly who was "it."

Sheridan, who was entitled to carry the biggest broom, is the same driver who won the run-off for the Hower trophy in the last Glidden tour.

The appended table shows the scores of the cars that finished the run:

	Touring	Cars			
		Roa		Tech-	
Driver.	Car.	Pena	lty.	nical.	Total.
**Hal K.	Sheridan, White		0	0	Clean
Bert Mau	cher, Peerless		0	0	Clean
Frank Yes	ger, Studebaker .		0	0	Clean
C. E. Titn	nan, Matheson		1	0	1
Harry Mic	chenor, Lozier		2	*n. e.	2
James P.	McNichol, Mathese	on	3	Clean	3
T. W. Be	rger, Oldsmobile .		0	. 5	5
H. B. Sha	de, Pullman		7	n. e.	7



TRUMBULL (PACKARD), WINNER IN RUNABOUT CLASS.

(). W. Hoffman, Stearns 0	9	9
William Crawford, Franklin 11	n. e.	11
N. J. Fox, Locomobile 12	10	22
Webb Jay, Kisselkar 24	n. e.	24
J. A. Moran, Stevens-Duryea 26	n. e.	26
Maylin Leinau, Acme 26	n. e.	26
Paul B. Huyette, Peerless 31	n. e.	31
H. B. Hills, Jr., Royal Tourist 38	n. e.	38
H. K. Kneeper, Frayer-Miller 16	25	41
Hills Motor Car Co., Corbin 42	n. e.	42

Robert Shirk, Stoddard-Dayton 0	45	45
A. J. King, Studebaker 64	n. c.	64
Frank LeFlen, Garford 15	.50	65
Robert Auschenfelter, Autocar 107	n. e.	107
James W. Florida, Locomobile 109	.0	109
G. A. Purcival, American121	n. e.	121
T. M. Twining, Crawford168	n. e.	168
H. P. Frey, Columbia174	n. e.	17 <i>A</i>
H. F. Greenwalt, Mitchell186	.0	186
A. J. Martin, American Mors222	ne.	222

** Sheridan won run-off. * n. e.-Not examined

** Sheridan won run-off. * n. e.—Not	examin	æd.
High Powered Runabo	uts.	
John Trumbull, Packard 0	.0	Clean
E. S. Youse, Thomas 15	n. e.	15
A. A. Jones, Ford 20	n. e.	20
Stewart Lasear, Pullman 34	n. e.	34
Robert Morton, Pullman 37	0	37
S. H. Collum, Stearns 0	40	40
J. R. Maynes, Autocar100	n. e.	100
P. E. Varney, Oldsmobile112	n. e.	112
William Henry, Ford397	n. e.	397
Thomas Wilkinson, PackardOut		
J. W. Parkin, ParkinOut		
F. Gilkinson, ColumbiaOut		
Light Runabouts.		
Maxwell Company, Maxwell 51	0	51
W. M. Cram, Litchell 62	0	62
J. A. Hess, AutocarOut		

Go-as-You-Please.

Dan Webster, Frayer-Miller,

Awarded to most popular driver.



SHERIDAN (WHITE), ON THE BAD ROAD NEAR ALLENTOWN.

PROGRAM FOR FLORIDA SANDFEST

Seven Events on the Card, Including Contest for Dewar Trophy—List of the Prizes and Conditions.

That freak racing cars, designed for abnormal speeds at short distances only will be eliminated at the annual Ormond-Daytonna carnival, which is on the calendar for the week March 2d to 7th, is made plain in the entry blanks sent out this week by the Automobile Club of America, which is managing the meet, In order to qualify for the short races—the mile and kilometre record trials, the one mile race for the Dewar cup, and the two miles a minute eventthe cars must have competed in one of the three long distance events, and must have covered at least 100 miles at an average rate of 60 miles per haur. As any car that can maintain a mile-a-minute speed for one hundred miles is surely not a freak, this condition doubtless will be a factor in swelling the entry lists.

According to the entry blanks but seven events have been carded, but if these are well contested there should be no complaint from spectators, provided of course, the meet is managed with any sort of system, something that has not prevailed at previous Florida carnivals. The exact time of starting each event will depend on the tide and condition of the beach, and all the races will be started from the club house at Daytonna, so far as is practicable. As has been told in the Motor World, loops will be built at each end of a sixteen mile stretch of sand, affording a 32 miles circuit for the long races.

Doubtless the most important event carded is the 160 miles race for stock chassis, and manufacturers entering cars in this event will have to prove that they have actually manufactured and delivered or have ready for delivery at least ten similar chassis in each and every respect, on or before February 15th. In this event the total piston area shall not exceed 103.87 square inches, which will admit the equivalent of a four cylinder engine having a bore of 5½ inches. In all the other events cars will be limited in weight to 1,100 kilograms (2424 pounds). Following is the full program of the meet:

The Automobile Club of America Cup—288 miles (nine laps of 32 miles), standing start. Entrance fee, \$200.

Invitation Race for gentlemen amateur drivers, for a Silver Cup—128 miles (four aps), standing start. Cars to be eligible must have been owned by the entrant prior to the time of the public announcement of the race. Entrance fee, \$100.

Minheapolis International World Championship Trophy—100 miles, standing start. Present holder, S. F. Edge, London, England. The cup must be won twice to ob-

tain permanent possession. Entrance fee, \$50.

Stock Chassis—160 miles (5 laps). A "stock chassis" shall mean that the maker of the same shall have actually manufactured and delivered, or have ready for immediate delivery, at least ten similar chassis in each and every respect, on or before February 15th, 1908. The type of the body is left to the choice of the entrant, provided it has seats for at least two and carries at least two (driver and mechanic). Any American or foreign stock chassis is eligible, providing that its total piston area shall not exceed 103.87 square inches, which will admit the equivalent of a four cylinder engine having a bore of 534 inches. Silver Cups to contestants finishing first and second. Entrance fee \$100.

One mile, flying start, for the Sir Thomas Dewar World's Championship Trophy. Present holder is Fred Marriott of Newton, Mass. Not more than four cars will run in a heat. A second round of heats will be run, if necessary. The winner of each heat (or second round of heats, as the case may be) and the fastest second car to compete in the final. The entrance fee for this event, as fixed by the deed of gift, is \$50, which is deposited in a fund in the hands of trustees of the trophy for special road construction.

Two miles, flying start, for the two-milea-minute trophy, to be run in the form of time trials, winner to equal or exceed a speed of 120 miles an hour. Entry fee \$50.

Record speed trials for mile and kilometer. Entrance fee \$25.

Another Pasadena-Altadena Hill Climb.

After much discussion the Southern California Automobile Dealers' Association finally has decided to repeat its annual Pasadena-Altadena hill climb. It is on the calendar for February 22d, and the program for decision is as follows: Runabouts, \$1,000 and under, two passengers, weight per passenger, 130 pounds. Touring cars, \$1,001 to \$1,500, four passengers; weight per passenger, 130 pounds. Touring cars, \$1,501 to \$2,000, five passengers; weight per passenger, 130 pounds. Touring cars, \$2,001 to \$2,500, five passengers; weight per passenger, 145 pounds. Touring cars, \$2,501 to \$3,000, five passengers; weight per passenger, 165 pounds. Touring cars, \$3,000 to \$4,000, five passengers; weight per passenger, 175 pounds. Touring cars, \$4,000 and over, seven passengers; weight per passenger, 145 pounds. Runabouts, \$3,000 and under, two passengers; weight per passenger, 150 pounds. Runabouts, 3,000 and over, weight per passenger, 150 pounds. Special event for four cars with fastest time in previous events.

"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

ROUTE FOR NEW YORK-PARIS RACE

The Itinerary Permits of Option at Several Points—Possible Failure Discounted in the Conditions.

Although the names and number of starters is shrouded in beautiful uncertainty, the Paris newspaper which is promoting the so-called New York to Paris automobile race, has announced the itinerary selected for the great contest in shipping motor cars as freight over circuitous and difficult routes. It is a little indefinite in spots, but in a general way indicates the path the carriers will have to take. As outlined it consists of "the crossing of the United States without any auxiliary power whatsoever, unless during the passage through the Rocky Mountains and the Sierras. Then from San Francisco to Seattle along the glacial coast of British Columbia as far as the entrance to Alaska by way of Valdez. Then by roads or frozen streams to Norton Sound, to Nome. Bering Strait may be crossed either on the ice or by steamer. In Asia the route may be either by land or by way of the ice along the shores of the Arctic Ocean, through 5,000 kilometres in Siberia, following the Lena River, passing through North Siberia to Irkutsk; thence to Paris by the route of the Trans-Siberian Railroad to Moscow, St. Petersburg, Berlin, and Aix-la-Chapelle.'

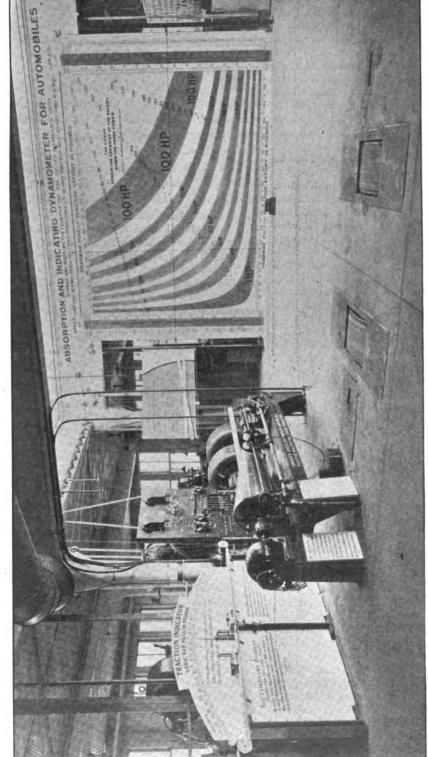
The start is to be made between February 10 and 15 from Times Square, New York. In traversing North America the speed laws of the various localities will be respected, it is announced, so that the contest will not partake of the nature of a speed race. In anticipation of none of the contestants reaching Paris, the promoters, scenting probable failure, have "cast an anchor to windward" by providing that the cup which is offered shall go to the car which succeeds in getting farthest from New York.

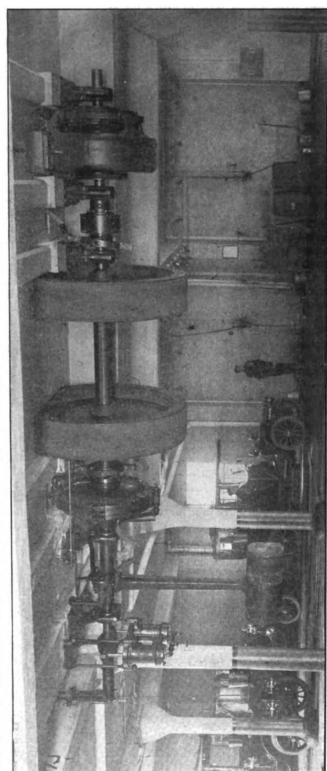
Rioters Routed by Automobiles.

Whatever may or may not be done with automobiles in war they have had a satisfactory test in dealing with a riot, which is war in miniature. This was at Muncie, Ind., on Saturday, 4th inst. Muncie, in common with several other cities in the Hoosier State, has a street car strike in progress, and on the day mentioned it developed riotous features. The traction company was for having the militia called out, but the police and deputy sheriffs said that with the aid of automobiles they expected to be able to get along without troops.

They did. It was in outlying sections that the automobiles were brought into play. Six of the vehicles were loaded with special officers to patrol the outskirts of the city. Mobs that had gathered in Congerville and Macedonia were quickly dispersed.

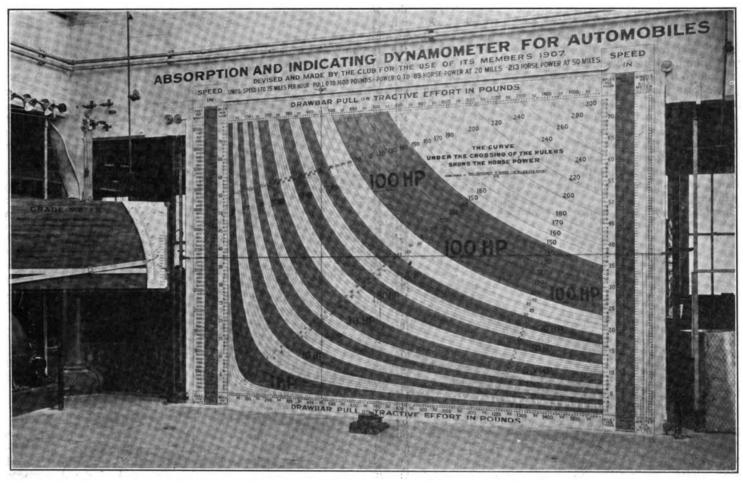






A. C. A. Dynamometer and Operating and Indicating Apparatus.

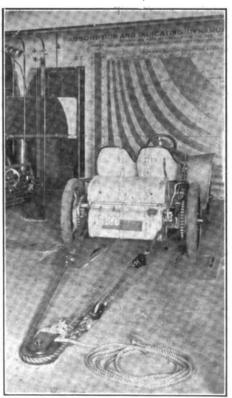
A. C. A. Sets Up Imposing Plant to Test Car Capacities



INDICATORS SHOWING COMPLETE RESULTS OF TESTS

After more than three years of patient development the Automobile Club of America has produced what with apparent right is claimed to be beyond question the most complete and efficient car dynamometer in existence. The plant, representing a cash outlay of something like \$10,000, is the invention of Dr. Schuyler Skaats Wheeler, first vice-president of the club and an engineer of the highest standing, and has been built under his supervision as chairman of the building committee. Although announced prospectively in May, 1905, when the plans for the new club house were first made public, the dynamometer has only just been completed, its first official trials being consummated Tuesday of this week in the presence of a number of guests of the club, newspaper representatives and others, at its palatial quarters.

The opportunities for inspecting the device offered at that time were most excellent, a full set of working drawings of the dynamometer being laid open for inspection in the grill room, while the apparatus itself, which is placed in a wire enclosure of the repair shop on the top floor of the club house, on West Fifty-fourth street, New York, though extremely intricate, was made thoroughly understandable



CAR UNDERGOING A TEST

by the legends attached to the various parts as well as by the oral demonstration given in connection with the several tests which were carried on. Dr. Wheeler himself conducted the trials after explaining the principal points of the system, while former Presidents Dave Hennen Morris, A. R. Shattuck, and Gen. George Moore Smith, of the building committee also were present.

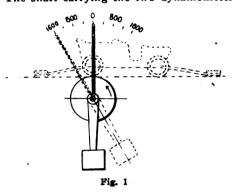
Some idea of the completeness of the dynamometer may be gained from the statement that it is capable of measuring and recording directly the speed of the car under test, the draw bar pull or tractive effort, the horsepower delivered at the tires, the grade climbing ability and the power of the brakes. But its most significant merit is that it is capable of integrating these values by mechanical means, thus affording the exact results at every instant of the test and without the necessity of any calculation whatever on the part of the test crew. In this respect it is probably the most complete arrangement of the dynamometer class ever devised.

In principle it comprises merely a couple of tread rollers on which the wheels of the car are placed and which are mounted in such a way that the machine may be driven



into position over them under its own power, the tops of the rollers projecting only a very little above the level of the test floor. When anchored against both forward and backward motion, the complete tests as above outlined may be performed at once. Up to this point, the system may be said to resemble that employed in the dynamometers used both in automobile and locomotive testing up to this time. The particular novelty which it possesses is confined to the fact that the usual draw bar mechanism for measuring the actual pull of the vehicle, is done away with the anchors at both ends being fixed, and the actual pull being calculated from the torque of the dynamometer shaft itself, thus simplifying the mechanism without, in this case complicating the result in any way.

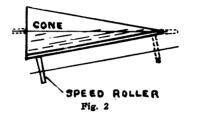
The shaft carrying the two dynamometer



rollers is mounted in brackets suspended from the ceiling of the floor below the test room and is connected by means of friction clutches with either of two other shafts in the same line, one of which is mounted at either end. That upon the right. looking toward the front of the car under test, carries an electric motor which is used in testing the braking power of the car, while upon the other side is mounted the dynamometer, proper which consists of a special form of hydraulic brake, the stator of which is connected with a heavy pendulum weight which is displaced through a small angle as the rollers turn, as in Fig. 1. The motion of this pendulum is transmitted to an arm above, which moves across a scale showing the draw bar pull in pound readings, the deflection being in either direction according to whether the car is being drivén forward or backward. By means of a very delicate electrical contrivance, the motion of this pendulum indicator is made to control the motion of a small electric motor which through a cable drive causes a vertical tape to move across the horsepower chart at the front of the room. The position of this tape with regard to the scales over which it passes thus records the exact draw bar pull at any and every instant during the progress of the test.

For determining the speed, which is the only other variable element entering into the calculation, a special device is used which, though somewhat roundabout is nevertheless extremely accurate. Two ele-

ments are utilized in calculating the speed whereby the errors possible with any fixed scale are eliminated. In the first place a long steel cone of exact taper is mounted accurately and driven at stated speed by a small electric motor under the control of a sensitive hydraulic governor, as in Fig. 2. To enable the speed of the roller to be checked with absolute certainty a bell is made to ring at the end of every hundred revolutions, so that at the normal speed of 200 r. p. m. the bell rings every half minute. This arrangement as described, it is to be understood, serves mere-



ly the purpose of establishing a standard of time.

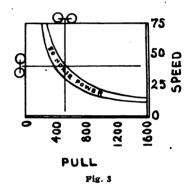
The second element of the timing device consists of a second shaft arranged parallel to the surface of the cone and driven from the dynamometer at a speed which is always proportional to that of the rollers. Mounted on the shaft is a contact wheel touching the cone, which may be slid back and forth along a spline on the shaft. By means of a small electric motor its position may be altered by moving it along the cone in either direction. The control of the motor is vested in a relatively simple system mounted in the wheel or speed roller itself whereby if the speed of the roller is not the same as that of the cone at the point where it makes contact the roller is moved along the cone until it comes to a point where the surface speed of the cone and the surface speed of the roller are the same. This axial movement is, of course, produced by the small pilot motor, current to which is controlled by the contacts on the speed roller itself.

In this way the speed roller automatically seeks out a position on the cone which is traveling at the same rate of linear speed. But the angular speed of the cone being an absolute constant, the distance of the roller from its apex forms an accurate measure of the rate of speed of the dynamometer, or, in other words, of the car under test. The movement of the speed roller along its shaft being communicated to the chart by means of a second system of cables, causes a horizontal tape to travel up or downward, thus indicating the speed on the proper scale.

In this way the two indicating systems automatically seek out on the chart the rates of draw bar pull and speed corresponding to the power being developed at the wheels of the car at any instant. The chart being drawn in the shape of a horse-power diagram with speed and drag as variables, it is evident that the intersection of the vertical and horizontal tapes must in-

dicate the horsepower curve corresponding to the power, as in Fig. 3.

A supplementary device, which is fully up to the measure of the others in the way of theory, is the grade meter which is arranged to show directly in angle and in percentage, the grade which the car could climb under any condition recorded on the chart, neglecting wind and road resistance, and assuming that the driving wheels do not slip. The indicator is based on the principle that the sine of the grade angle is equal to the tractive effort divided by the weight of the car. The grade meter itself is nothing more nor less than a weighing balance in which the drawbar pull is measured by the position of a scale beam weighted by a pein which is placed in a position on the beam to correspond with the weight of the car. The angle of the beam



causes the pointer on its extremity to record the angle of the theoretical hill.

By connecting the electric motor, which is on the other end of the dynamometer shaft, the transmission friction as well as the braking power of the car may be tested. A special motor generator is used to deliver current of any desired strength to the motor, which thus drives the wheels of the car under test. The switchboard readings then give the power being used in driving the mechanism of the car, an ingenius method of labeling the switches indicating at once whether the car is absorbing power or is giving it up to the electrical system according to whether positive or negative readings are given by the instruments. By applying the brakes under these conditions, the amount of retardation possible may be observed, while by reversing the direction of motion of the dynamometer, the braking power may be tested for backward as well as forward motion of the car.

The first car to be officially tested on the new plant was a 25 horsepower Pope-Hartford belonging to the club. The showing made was most creditable to the machine, the maximum power developed on third speed, being equivalent to the rated horsepower, which, as the power shown on the chart is the output delivered at the rear wheels and not the nominal figure ordinarily catalogued, proved that figure to be a conservative one. By way of illustrating the range of the testing plant, the full observations for each of the three forward

speeds are appended, as read directly from the board.

		Second speed.	
Speed in miles per hour	15 510	25 340	36 270
ed at rims of driving wheels Equivalent grade in	20	22	25
per cent	20	14	11

Subsequently W. K. Vanderbilt Jr.'s 90 horsepower Mercedes racer of Ormond fame was put on the rollers and raced madly on the low gear, the engine proving so powerful that with the water pressure then available from the storage tank on the roof it was impossible to brake it down to its full power. It was announced parenthetically at this time, that a new pump yet remained to be installed before the plant would be quite complete. On the high gear, the same car developed 75 miles an hour, while delivering a little short of 50 horsepower. A Westinghouse car was tested later, and did well on the first and second speeds, but failed on the high gear owing to overheating because of the inadequate cooling of the small fan placed in front of the radiator.

Another test, introduced by way of illustrating the utility of the brake, was that of a speedometer, which was tried by running the front wheels of the car on the rollers while the latter were driven electrically, the readings of the instrument being checked against those of the speed indicator on the great chart.

The arrangements of the plant are complete in every way save for a few minor details which remain to be smoothed over. And from the huge swinging exhaust pipe, through which an exhaust fan carries off the motor waste, to the certificate of the exact mass of the pendulum by the Fairbanks Morse Co., evidence is given of a tremendous outlay of pains and skill to make the system one of unexcelled exactitude and creditability—an effort in which has been most successfully rewarded.

Increasing Use of the Clutch Brake.

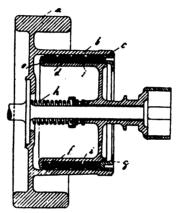
One of the "little things" in the constructional line which go such a long way toward improving the general performance of the machine without at the same time altering its principal features in the least, is the adoption of the clutch brake. This is growing more common every year and in the course of time will likely become almost if not quite universal. No matter how well designated and made, there are times in the life of every clutch when it will refuse to release as promptly as it should, or when, for some perhaps inexplicable reason, the clutch shaft continues to spin after the clutch has been released and at such a rate as to prevent gear changing without braking the gears by burring together the ends of the teeth. The use of the clutch brake obviates this entirely making it possible to shift the gears "sweetly" on all occasions.

NOVEL SELF CONTAINED CLUTCH

Combining Principles of Both Ring and Cone Clutches It is a New Departure

—Details of Its Construction.

An exceedingly novel development of the multiple ring clutch idea embodying at the same time the advantages of the wedging action possessed by the cone type, is the recent invention of August Horch of the Saxony firm producing a car of the same name. Briefly, it comprises a large number of split rings of triangular section which are contained in the annular cavity formed by two telescoping drums, one of which is



formed integral with the fly wheel and the other as the secondary or driven member of the group. Forcing the two drums toward one another axially, serves to crowd the rings together, thereby spreading them and forcing them outward and inward against the drum surfaces, which thus are locked together.

The general scheme will be seen from the illustration here shown, which is a plain half-section. The sleeve or drum, b, is mounted on the fly wheel, a, and has an internal screw thread, c, at one end. The drum, d, fixed to turn uniformly with the driven shaft and carrying the flange, e, is inserted within the first mentioned drum leaving a space between them in which the rings, f, are placed. The rings being split and properly abutted, any end pressure brought to bear upon them must serve to expand them both outwardly and inwardly against the two confining surfaces. They are retained in position by means of the junk ring, g, which is screwed into the drum, b.

The clutch is of the self-contained pattern in so far as actuation is concerned. That is to say, the helical spring, h, serves to press the drum, d, away from the flywheel, but compresses the rings, owing to the presence of the permanent ring, g. The method of actuation may be the same as with the ordinary type of cone clutch, the usual forked yoke being connected with the pedal in the usual manner. By proportioning the angles of the sides of the rings properly, it is evident that a very gradual engagement may be secured, while at the

same time, the clutch will be unlocked by the very action of the driving torque so soon as the end pressure is released from the group. The arrangement permits the use of a large amount of working surface in the clutch and admits of good lubrication by splash, since the drums may be made oil tight, and there is little in the way of me chanical complication, despite the fact that a very great number of rings may be employed upon occasion.

Knocking Traced to Unusual Cause.

A most unusual source of knocking in the motor is reported by a Western dealer handling a well known line of popular priced cars which are fitted with horizontal opposed motors. Several different machines had developed the same mysterious sound without apparent provocation and not until one of them was dismantled and carefully inspected did it appear that the noise was caused by the slapping of the piston against the cylinder wall at the rear end, the bore proving to be larger at that point than at the crank end. At first it was thought that the trouble was due to some inherent difficulty in the cylinders themselves. Subsequent investigation, however, revealed the fact that in grinding in the valves, the mechanics were not sufficiently careful to prevent the surplus emery from working into the cylinder. The effect of this carelessness had been to grind off a very appreciable amount of surface from the under side of the bore

French Car with Belt Transmission.

Ordinarily the use of the belt transmission in motor car propulsion is considered too antiquated and inefficient for serious regard. It is a matter of no little surprise. therefore, to find that a commercial vehicle is even now being built in France in which this feature is employed regularly. The machine in question is the Pantz, which is made in 11/2 and 31/2 ton sizes, with motors of 9-11 and 12-15 horsepower, respectively. In these vehicles, the motors are mounted horizontally under the footboards, while the change gear box is located in the rear, driving the wheels through very short side chains. The connection between the motor and gearset is by means of a crossed belt which thus is made to run nearly the entire length of the chassis. The maker of the Pantz is among the oldest builders of commercial vehicles in France, and his product is said to have a good record of performance.

Careful drivers generally make it a practice to declutch at the instant of crossing a "hump" in the road, to relieve the strain upon the car by checking the driving force and allowing its momentum to overcome the extra resistance which the obstruction presents. When this is done skilfully and the clutch again engaged before the machine has fully recovered, it is found that the shock experienced by the passengers is materially reduced.

ABOUT MANUFACTURERS' AGENTS

Varied Phases of Their Business Character
—Some Indeterminate Factors in
the Value of Services.

For a business requiring no other capital than enough to pay office rent and railroad fare, and partaking of the nature of a free lance disposal of personal services, that particular line of endeavor known as being a manufacturers' agent is perhaps unique in the automobile trade. Not but what the manufacturers' agent is not a familiar figure in other lines of business as well, because he has of late years become a well recognized institution, but in his activity in the merchandising of automobile parts and accessories he presents some interesting phases.

No discounts or commissions are yielded more grudgingly than those to the manufacturers' agent because of the difficulty it creates with the jobber unless it be known positively that the agent is on a salary basis and is not enjoying an under discount. It is one of the first principles of a jobber's buying to insist on the lowest price that is made to any one and the fact that a manufacturers' agent can sell on commission is taken as prima facie evidence that the price could be lowered.

On the other hand, the manufacturer is reluctant to enter upon a salary arrangement with the agent since he has no control over his time and can by no means be certain that the agent's efforts will not be devoted more ardently to those of his lines which give a profit according to the amount sold.

Yet the manufacturer who comes into the automobile parts or accessory field comparatively unacquainted with the personnel of the trade and the intricacies of its policies and arrangements, is peculiarly susceptible to the arguments of the manufacturers' agent as to the importance of the latter's services. Needless to say such representations as to the ability of the agent to create a market for the manufacturer's goods and place them favorably in the trade are often greatly overstated, while again some of the most successful and satisfactory agents are strangely diffident in their views as to what they could do for a prospective client.

When the agent who is soliciting an account evinces any overwhelming degree of enthusiasm and paints glorious pictures of the immense volume of sales he is sure of making if the manufacturer will entrust the large end of the selling to his tender care, it is well for the manufacturer to give a show of insistance on a commission arrangement as the only one he would consider. If the agent jumps at the chance the manufacturer can reconsider or name an impossibly small commission, or discount, if it be his real intention to avoid giving his

agent a commission. The commission proposition, however, will serve to test in some degree the genuineness of the agent's mental visions of big sales.

Not a few manufacturers who have angaged the services of so-called manufacturers' agents at high salary figures have found that they picked the wrong man, and that the agent's time was largely spent in soliciting still other manufacturers for accounts on a salary basis, so that instead of his being active in the sale of goods he was simply swelling the multiplicity of his salary sources.

"I don't believe he did more than an hour's pushing of our goods during the whole season," said one manufacturer recently, in describing his troubles with an agent, who had talked him into a salary contract with the persuasion that it was the road to fortune. "If that fellow had used the same power and eloquence in pushing our line that he did in talking about himself, in a year we would have been the biggest people in the business."

Even the commission system does not give the manufacturer any guarantee of hard work on the part of the agent. Some of the less scrupulous of those posing as manufacturers' agents have in the past been known to enter upon as many commission arrangements as possible, for as wide a range of articles as they could get. Having secured contracts by which they would get a "rake-off" on all sales in certain territories, they have calmly waited in their offices for the commissions, knowing that out of the large number of things covered by their contracts a certain proportion were bound to prove successful and enjoy a big sale, without effort on their part. Nor would they hesitate at the end of the season to "point with pride" to the conspicuous successes on their list despite the fact that their contributions . to such results were nil.

But the unfortunate experiences various firms have encountered in dealing with agents who do not attempt to "deliver the goods" are offset by the valuable and satisfactory service which many of them have had from manufacturers' agents who have taken a broad view of their field and responsibilities and who have also been equipped with the personal acquaintance, the knowledge of the trade and the selling ability that would enable them to perform what was expected of them. Many a manufacturer has felt the benefit of relying upon the experience and judgment of his agent in making his introduction into the market and in determining his policies in relation to the trade. With a list of several of the big firms in non-competing lines, an agent can give to each one the advantages of the sum of his knowledge gained from doing business for them all, having a wider view than the men devoted to one particular line.

To measure exactly either the direct or the indirect results of the agent's work

where he has a hand in the promotion of the business naturally is a most difficult matter except in specific cases where certain definite tasks are set. If a manufacturer having failed to get his goods handled on a satisfactory basis by this or that particular house, entrusts the negotiations to the agent and the latter succeeds in straightening matters out, it is easy to see the nature and success of his work. Similarly, if in seeking to close an equipment contract with an automobile manufacturer the agent is able to swing the deal, there is again definite evidence of his value. But in the general results of his ordinary work it is extremely difficult to judge, especially where he works among the jobbers.

It is safe to say that the agent who takes the mysterious attitude and seeks to convey the impression to the manufacturer that he can exercise a mysterious hocuspocus or hypnotism on the trade, which his client must not attempt to inquire into or, understand, is bluffing to some extent. If the manufacturer needs trade advice and the assistance of a selling agent, his safest plan is to select the man who can turn to such clients as he has and has had, for reference, and whose proposals for pushing the manufacturer's goods have in them the element of conservatism and sound sense. with the compensation in some manner proportioned and contingent upon the degree of subsequent success.

American Chassis Popular in Sweden.

Stockholm and in fact Sweden are attractive fields just now for the cultivation of American manufacturers of automobiles. says the American Exporter. A certain prestige may have been gained by the fact that the motor cabs recently introduced on Stockholm streets came from America, at least so far as the chassis is concernedbodies were built locally. There are about forty-five motor cabs now at work, the greater part of them of the above description, and it is said that the number is soon to be increased. They are giving satisfaction, though the bodies that were made for them are both ugly and awkward. Two or three other makes of American automobiles are on this market. Complaint is made that sales are slow, but then the whole question of motor cars is very young yet in Sweden. It is estimated that there are not more than 500 motor cars in Stockholm, plus about 300 in all the rest of Sweden. Swedish manufacturers in this line are doing little as yet beyond the production of a few freight trucks that are quite popular in Stockholm, and reported to be satisfactory in service.

Police Chief Asks for Automobiles.

Automobile patrol wagons will be added to the equipment of the police department of Cleveland, O., if Chief Kohler can have his way. Among a number of recommendations made in his annual report is one for several of the now widely approved vehicles.



PROBLEM OF WHEEL DIAMETERS

Their Adaptation to Service as Governed by Resistance, Strength and Vehicle Mounting—Curious Extremes.

A subject for constantly recurring discussion and one which is bound to come in for more serious attention in the future than it has even in the past, is that of wheel diameter as related to questions of tractive resistance, motive power, and strength. At the present time and in American motor vehicle practice, wheel diameters vary from 28 to 54 inches—the first applying to light vehicles of the runabout type and the last to road tractors of a single make. More generally, the average size of the road wheels of touring cars has been increased from 34 to 36 inches for machines of high power and weight within a couple of years, and the change has proved beneficial. In the high wheeled buggy, is found a most important exception which is being seized upon by numerous advocates of the high wheel principle as an illustration of its advantages.

What then are the advantages of the high wheel as compared with the low, and what factors may be considered as limiting wheel sizes, all ordinary considerations being taken into account? The question has been thrashed out over and over again in other lines, from the case of the horse-drawn vehicle itself, down to the locomotive, which also partakes in some measure of the elements which the motor car designer must take into account. At present, the trend of automobile design is backward, that is to say toward the high wheels which were used on the earlier types of pleasure car. This backward swing of the pendulum is to good purpose, however, and answers directly the demand for better resiliency and longer tire life, quite as much as any inherent advantage accruing from the use of the high wheel. As the use of smaller wheels followed the adoption of the pneumatic. and was in obedience to the demands of economy, moreover, it is evident that tires have been the moving cause both in getting away from, and again approaching the high wheel. The question of wheel size, then, appears to have been but little considered thus far as a problem by itself.

Considered mechanically, that is, with regard to its smoothness of action and otherwise as affecting the vehicle merely as a carriage, there can be no doubt of the advantage of the high wheel. The greater the wheel radius, the nearer the approach of the circumference to a straight line, and so the less its affection by ruts and other depressions or obstacles in the road. To put it another way, the smaller the obstacle the less the power required to pull the wheel over it. So, the greater the size of the wheel, the less the power required to

pull it over an obstacle of given size. The relative conditions are exactly the same. Hence, the large wheel is adapted to run more uniformly over a given surface than the small one, and, other things being equal, is superior to it.

At the same time, the greater the diameter of the wheel, the higher must be its axle from the ground, and while up to a certain point, this creates no disadvantage, the raising of the centre of gravity thus brought about must, in time, become a menace to stability. With the light motor buggy, and with the very heavy tractor, one of which carries but a small load, while the other carries its load at only a snail pace, even a very high center of gravity is permissible. Where higher speed and load factors are considered, however, it is not, at least with the present standards of wheel gauge, and so with the increase of wheel sizes beyond the present maximum standard of 36 inches, it must be necessary to adopt new methods of suspension in order to lower the body. This may be done either by cranking the axles liberally, and doing away with the live rear axle construction in present use, or else by adopting some such method of under suspending the frame as was suggested recently in these columns.

In the matter of strength, of course the high wheel suffers by comparison, yet not so much as would at first appear to be the case, owing to the fact that considerably more dish is possible without resorting to excessive cambre with the high wheel than with the low. In this way, the high wheel may be made of relatively greater strength in regard to transverse strains than the low and without distorsion. In the matter of resistance to dead load and torsional strains, however, it must be weaker, or, what is the same thing, for the same degree of strength it must be made proportionately heavier.

Considering the question of wheel sizes as applied to the driving or power side of the equation, it is evident that in the first place with two vehicles otherwise alike, but having wheels of different sizes, the power required to drive them must be about the same, that is solely with regard to the mechanism. The increased inertia of the larger wheels may have a slight effect, and the fact that for the same vehicle speed the larger wheel must turn more slowly than the smaller, is of tremendous importance. It means in a word, that the gearing ratio must be much greater in direct proportion to the increase in wheel diameter which, unless it be possible to develop high and uniform motor torque at very low crank shaft speeds, means the continuance of gear reductions and the elimination of the hopeful prospect of absolute direct drives in the event of a general adoption of the high wheel.

Coming to the more important question of the actual differences in power absorbed by large and small wheels, the smoothness of action of the high wheel mentioned

above, implies correctly, a reduction in rolling friction which, according to the time-honored theories of General Morin, is held to be independent of tire width within nominal limits. The draw bar pull must decrease slightly as the wheel size increases then, regarding only the element of rolling friction. The factor of windage, however, which is of very great importance at high speeds, must be greatly affected by the raising of the vehicle from the ground, but may be compensated for to some extent by the development of low suspensions.

The cost of the high wheel system as compared with the low must be greater at present because of the necessity of developing new methods of springing, new designs in other respects, and also to a very glight extent, because of the greater amount of material used. Ultimately, however, it may be brought down to a par with the cost of the type in present use, should it prove desirable. Roughly speaking, the cost factor is the last to be considered in this connection, since tire life increases with the increase in wheel size, and lower maintenance compensates for increased first cost, judging on the tire basis alone.

The entire question of the determination of the proper wheel diameter then appears to hinge about the method of chassis mounting. The present high wheel developments in the two extremes of very light and very heavy vehicle service, are seen to be rational within their present limits. But whether they prove to be forerunners of a high wheel era of universal adoption, must depend very largely upon fashion in design. It would hardly seem that the gain brought about by the use of very large wheels, say of more than 38 inches diameter, would be sufficient to warrant the complete overthrow of present methods of suspension and axle construction. Certainly, the advantage of the large wheel is not sufficient in itself to warrant the adoption of the solid tire under present conditions of suspension, and so the matter largely reduces itself into a resolution of the suspension problem into its lowest terms. Pending that, all developments toward very large wheels must be viewed in the light of experiment, as applied to vehicles of moderate load capacity and high speed attainments.

Bearings with 30,000 Miles Record.

Since performance is much more convincing than promise, the Wm. Cramp & Sons Ship & Engine Building Co., of Philadelphia, is issuing souvenir postal photographs of a set of Parsons' white brass bearings which have had 30,000 miles running in a Packard car. The picture makes it evident that the bearings were in perfect shape in spite of so great a mileage, further testimony to the same effect residing in the fact that after having been "taken" by the camera they were replaced in the car for continued service without it even being thought necessary or desirable to scrape them.



CALIFORNIA WANTS FIRE FIGHTERS

Seven Cities Arranging to Purchase Automobile Apparatus—How Motors are
Started Without Cranking.

Seven cities of southern California are ready to begin negotiations for the purchase of automobile fire engines, now that the two Rambler cars, specially built and equipped with fire-fighting apparatus by Thomas B. Jeffery & Co., for the city of Long Beach, have proven so efficient.

Long Beach was the first city on the coast to order motor fire engines. The cars were designed at the Rambler factory in Kenosha, Wis. They have 40 horsepower motors, a speed of 30 miles an hour is possible, and they will carry 800 feet of 2-inch jacketed hose, a 35-gallon copper chemical tank and 200 feet of 2-inch chemical hose. Space is provided for buckets, hooks, several short ladders, axes and four men.

In competitive test between a Rambler car and the old horse-drawn apparatus, made before the order was placed, a short run of 3880 feet was arranged. Every one, except the Rambler man, put his money on the horses. The auto was to start with a dead engine. The Rambler won, making the distance in just two minutes flat. Immediately it was decided to replace all horse-drawn vehicles with automobiles.

Since the cars were installed the Rambler agent has invented a tilting incline platform on which the car stands level when housed. At the sound of the alarm, the driver springs to the seat of the car and drops a hook which releases the chain securing the platform. The platform tips, the car glides down, the engine starts itself and the race to the fire begins without the loss of a second's time.

Motorphobic Magistrate Under Arrest.

For the first time in many months automobilists on Monday of this week drove through Magnolia, N. J., without fear of arrest for exceeding the prescribed speed limits as ordained by the State motor vehicle act. Farmers and residents driving by smiled as they drew their teams to one side to let the motorists pass for they realized that they were enjoying a pleasure that hal long been denied them. For C. Folk Klein, Justice of the Peace at Magnolia, and long a terror of automobilists who use the White Horse pike, was in the Camden county jail, arrested on a writ of the circuit court for failure to satisfy a judgment issued against him.

Klein first came into the public prints when he arrested and fined James P. Mc-Nicholl, a Philadelphia contractor and politician, for speeding, and was the justice upon whom the contractor perpetrated the joke of bringing down to Magnolia five cars of one make and challenging the "Squire"

THE MOTOR WORLD

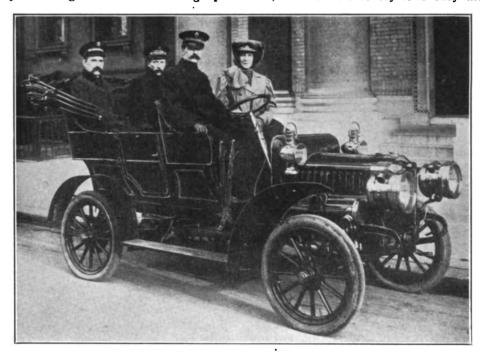
to pick out the one in which the violation of the law had been made. It is said that that was the only time that Justice Klein ever reversed himself, for he returned the fine of \$13.75 which he had levied.

Residents of Magnolia say that Klein had taped off a half mile stretch of road in front of his office over which he timed automobiles that drove past. He was helped in his work by one "Thad" Miller, who held up the cars when Justice Klein waved his flag. Sundays were always harvest days for the Magnolia justice and there was always a waiting line in front of his legal par-

AUTOMOBILE FOR MISSION WORK

It Was a Providential Gift to Commander Evangeline Booth—Devoted to Salvation Army Service.

No slum or hovel is now too humble to have visitors call in an automobile since Miss Evangeline Booth, the American commander of the Salvation Army, was presented with a Maxwel car. The machine goes anywhere that Miss Booth's duties direct, and needless to say it is busy most



COMMANDER BOOTH AND HER STAFF

lors. Klein got himself thoroughly disliked some time ago by advocating that the village of Magnolia hang steel gates across the highways, so they could be let down in front of any automobile that he considered violating the speed law.

This historical resume, however, has nothing to do with the case in point, which is that until the justice is released from jail, automobilists can drive by his place in Magnolia without fear of being haled before him.

Lee Heads Bay State Association.

Elliott C. Lee, formerly president of the American Automobile Association, was on Monday elected president of the Bay State Automobile Association, to succeed Louis R. Spear, who has held the position for three years, since the association was organized; Mr. Spear declined re-election on account of business. Harlan W. Whipple was re-elected vice-president, as was Harry Knight, treasurer, and James Fortesque, secretary. The new board of directors will be composed of George McNear, A. P. Underhill, J. C. Kerrison, Dr. Julian Hovestadt and J. W. Maguire.

of the time. As shown in the illustration, she not only uses it herself but employs it to convey members of her staff, as well. The manner in which Miss Booth acquired the car bears testimony to the well wishing of her friends. It was awarded to her as the result of a puzzle contest conducted by a New York newspaper. While the Salvation Army leader herself was not a contestant, a great many of those who competed specified that if they won, the car should go to her rather than to themselves. The winner proved to be one of this number and accordingly the machine was turned over to Miss Booth with a felicitous presentation.

Total New York Registration in 1907.

In his first annual report to Governor Hughes, Secretary of State Whalen reports that in the twelve months ending December 31st, 13,980 automobile owners registered in compliance with the laws of New York, an increase of 2,331, and that 9,386 chauffeurs were granted licenses, an increase of 2,051. The fees received through the motor vehicle department amounted to \$48,305, an increase of \$10,810 over 1906.



MAYOR PLANS BETTER REGULATION

He Recommends Changes in New York

City Automobile Ordinances—Some

Evils He Would Banish.

In his annual message to New York City's Board of Aldermen, sent to it on Monday of this week, Mayor McClellan pays considerable attention to automobiles. The Mayor's suggestions regarding the regulation of automobiles used on city streets are designed to correct present abuses and appear to be sensible and clearly stated. What New York has needed for some time is an ordinance regulating the charges on automobiles used for public hire, and the adoption of one by the Aldermen is one of the suggestions of the Mayor. He also recommends that the ordinance apply specifically to the so-called sight-seeing coaches and provide for their licensing, the same as applies to other vehicles. At the present time this class of vehicles does not pay any fee to the city.

The Mayor aims to prevent the use of siren horns on any cars used on the city streets except those employed by the Fire Department, as the siren horn has been adopted as the particular signal of the approach of apparatus and officials of the department and the indiscriminate use on other vehicles, the Mayor thinks, is apt to lead to confusion and possibly accidents. He has prepared an ordinance to regulate this, which will be presented to the Board of Aldermen.

Among the other evils that the Mayor desires to have corrected is the cutting out of mufflers on cars on the built up streets of the city; unnecessary smoke from exhausts, and the use of dazzling acetylene headlights within the city limits, the last named three suggestions being the most important.

The full text of that part of the Mayor's message relative to the regulation of automobiles, follows:

"There is no general ordinance in existence at the present time which specifically applies to the licensing of public automobiles. Under an order of the Supreme Court the Bureau of Licenses is now issuing licenses to such vehicles under the general ordinance relating to public hacks and cabs. This ordinance, however, was never intended in my opinion to apply to automobiles and fails to regulate their charges in proper fashion. I recommend, therefore, the adoption of an ordinance which will apply directly to these vehicles. At the same time I believe that some provision should be made for licensing all sight-seeing automobiles, which at present pay no fee whatsoever to the city.

"In this connection I also desire to call your attention to the necessity of preventing the use of sirens upon all automobiles other than those of the Fire Department within the city limits. The siren has been adopted as the particular signal of the approach of the apparatus and officials of the Fire Department, and its indiscriminate use by others results in confusion of traffic, which necessarily detracts from the value of such signal to the Fire Department. I have caused such an ordinance to be prepared for introduction in your board, and trust that it will receive your favorable consideration.

"I think it also most important that the following regulations should be adopted in regard to the use of all automobiles, both public and private, within the city:

"First—That all automobiles should be equipped with adequate mufflers, which never should be cut out within the limits of the built up portions of the city.

"Second—That, except for the first ten seconds after starting the engines of an automobile, no smoke should be allowed to come out of the exhaust pipe. It is wholly unnecessary and is simply an evidence of carelessness and incompetence.

"Third—That the use of acetylene headlights within the built up portions of the city should be prohibited. The use of these lights is very dangerous and has resulted in causing many accidents by dazzling pedestrians and drivers of vehicles coming in the opposite direction. These lights are unnecessary on the city streets, and I understand that responsible drivers of their own volition refuse to use them."

Elasticity of Multiple Disc Clutches.

One of the most advantageous features of the multiple disc clutch in contradistinction to the ordinary cone pattern, is its elasticity from the designer's point of view. By varying the number of discs in use the capacity of the clutch may be altered to suit any possible requirement, so that it is possible to use the same discs in the clutches applied to several different sized models. The same advantage also applies to corrections in clutch design found necessary after the trial model has been on the road for some little time. Furthermore, the fact that the discs may be made very cheaply and in large quantities adds to the advantages of the device.

Vehicle for Freight or Passengers.

A most plausible development of the commercial vehicle has just been introduced by a British manufacturer in the shape of a controvertible body suitable for carrying either passengers or goods. The sides of the top are normally closed and the vehicle takes the form of an ordinary luggage van. Upon occasion, however, the sides may be removed leaving a plain canopy top, while side seats may readily be installed in the interior. The machine is propelled by a 10 horsepower motor and in passenger carrying commission, is capable of accommodating eight persons inside besides two with the driver on the front seat.

MOTOR LINE ON TEXAS PRAIRIES

Automobiles Supersede Stages on a Fortyfive Mile Route—Cowboy Chauffeurs Run Them on Schedule Time.

It wasn't Jules Verne who first thought of a motor stage line across the Texas prairies. R. C. Burns of Lubbock-in-the-Panhandle-big, tall, with cheeks blistered by the sun in spite of his wide brimmed grav hat-originated the plan and has seen it to a successful realization. Five automobiles now make regular trips on a threehour schedule over the 45 miles between Lubbock and Plainview, the county seat of Lubbock and Hale counties. The line has a private right of way, with cattle guards across the ranch fences as if for a railroad, and a path is kept scooped free of sand. The chauffeurs are cowboys, attired in blue overalls and felt hats instead of the regulation motor costume. But though they are not mechanical experts they can push the lever to the last notch as well as any race driver, and not without reason, for they are required to make the 45 miles in three hours because the line carries the mail and is under contract to the government to keep that schedule. Often the mail arrives an hour early, but in only one or two instances has it been late.

Before Burns began his automobile line the traffic was carried on by stages. Lubbock is in the center of the Panhandle district, where many homeseekers are going and so has a brisk trade. The charge is not exorbitant, considering that the automobile line is the only means of transportation between Lubbock and Plainview. Burns's charge for the round trip of 90 miles is \$10; he receives \$50 a day for hauling the mail. One of the cars is used exclusively for handling the mails and express, and as a brisk trade is driven in the latter, the line has been most profitable to the promoter.

The line was formed only a few months ago when Burns purchased five 24 horse-power cars of a popular make, and equipped them with extra wide tires on account of the heavy sand. Then he ordered twelve extra shoes, twelve spare inner tubes, two barrels of batteries, twenty-four spark plugs and two extra transmissions. A completely furnished machine shop completes the equipment of the motor car road.

The line has been so profitable that Burns has planned to extend it to Big Springs, Texas, one-fourth of the way across the State: Burns is confident that he can make a "go" of it. Before the railroad ran to Amarillo his stage made a round trip of 220 miles between Big Springs and Lubbock, and as that was successful he figures that he can save money and get increased business by the adoption of automobiles in lieu of the old time system of horses and lumbersome stages.

AUTOMOBILES AID STATE THRIFT

What They Have Paid Massachusetts in License Fees and Fines—Report of the Highway Commission.

Automobiles supply material for a considerable portion of the annual report of the Massachusetts Highway Commission for 1907, and among other things they are, of course, held to be largely responsible for the rapidly increasing cost of road maintenance which is alleged therein. The report says:

"The destructive work of automobiles during the past year was even more marked than it was in 1906. The Commission has made a careful study of this problem, both in Massachusetts and in neighboring States." During 1907 some roads were treated with a preparation of tar, and regarding this work the report says: "It is hoped and believed that these methods of treatment will eliminate the dust and prevent ravelling of the surface at a cost that is not unreasonable." The Highway Maintenance Fund," derived from the re-registration of automobiles in the summer, amounted to \$43,616.43, and it is believed that an equal or larger amount will be derived from the re-registration now in progress. The Commission asks that the Legislature appropriate from this fund as early as possible in the session, as much preliminary work must be done in the spring. The Commission recommends an appropriation of \$75,000 for special treatment made necessary by automobile wear.

The report shows that during the year the commission received \$92,091.50 from its automobile department work, this being in fees for registration and re-registration of motor vehicles and for licenses for operators. Under that part of the law requiring that courts and trial justices keep a full record of every case in which a person is charged with a violation of the automobile acts and send an abstract of these records to the Commission there were received 1.112 abstracts. These indicate that during the year 1,026 persons were convicted of unlawful automobiling, 65 appealed, 41 were found not guilty, 106 complaints were placed on file, 12 were nol prossed, and in 12 the defendants defaulted. Among the causes of conviction were: Over-speeding, 604; reckless operating, 19; operating while intoxicated, 5; improper display or lack of register number, 67; operating without carrying license, 127; operating without carrying registration certificate, 28; operating an unregistered motor vehicle, 7; refusing to stop when signaled by officer, 12; operating with unlighted lamps, 54; operating without numbers on lamps, 108; violation of park rules, 91; miscellaneous offenses, 24.. The total amount of fines reported to have been

paid on account of improper automobiling is \$11.560.21.

The Commission revoked twelve licenses and six registration certificates for reckless operating; five licenses and two certificates for operating while intoxicated. Fifty-five complaints of careless or reckless driving were heard and twenty-six licenses and five certificates were suspended or revoked in addition to those above mentioned. The total number of licenses and certificates suspended or revoked was fifty-six. Concerning this aspect of automobiling the report says:

"There seems to be a growing sentiment throughout the Commonwealth that the safe and sane operating of these vehicles can best be accomplished by filing with the Commission complaints against careless or reckless operators, with the purpose of suspending or revoking the licenses of such operators. There is a weakness in the present law which does not give the Commission authority to summon witnesses and pay witness fees. Many apparently strong cases against operators are not presented to the Commission because, for various and obvious reasons, witnesses to the facts cannot be prevailed upon to testify as willing witnesses. If hearings of this kind are to be given, to be effective, the Commission should be empowered to summon witnesses and pay witness fees, and the Commission recommends that such action be taken by the Legislature.

"In connection with this part of the commissioners' work, it would seem proper that they might, in certain cases, take the initiative and cause aggravated cases to be brought before them for a hearing. This would, of course, imply a preliminary investigation by the Commission or by investigators working under its direction. In accordance with an opinion of the Attorney General, the present law does not give to the Commission authority to investigate cases of apparent reckless operating, but it appears that this could easily be done through the State police department, and the Commission recommends the passage of an act to provide that the State police shall look up cases of reckless operating when requested to do so by the Commission, and present the cases so investigated to the Commission at a formal hearing, notice of which shall be served on the person complained of.

"The Commission has sent a great number of cautionary notices to operators who commit minor offenses. It is believed that these notices produce a noticeably good effect. During the year the Commission has found it necessary to examine applicants for licenses to operate motor vehicles for hire, in order to be satisfied that the applicant is a proper person to receive such a license. There were 1,415 persons examined; 1,222 passed the examination successfully and 193 failed. Of those who passed 50 required a second examination and eight a third.

"The Commission issued a registration

certificate to a member of the diplomatic corps at Washington without fees, in accordance with the international laws. The fees, however, were paid by another person. The Commission recommends an amendment to the law, to provide that members of the foreign diplomatic corps may receive registration certificates and operators' licenses without the payment of fees therefor.

Guild Suggests Another Shakedown.

Massachusetts, speaking through Governor Curtis Guild, Jr., manifests lack of satisfaction with the result of the shakedown to which automobilists in that Commonwealth were subjected last year, and apparently another one is in order. In his inaugural address on January 2d the governor complained to the legislators that they had adopted his recommendation of the year previous only in part. He expressed his desire for further legislation along the same line, giving to his recommendation a flavor of righteousness by pointing out the injustice of taxing big touring cars and the little runabouts all alike. He said:

"Last year the General Court adopted in part my recommendation that the automobiles, which more than any other vehicle destroy the surface of the State highways, should be made to pay through a tax in the form of an annual registration fee, for the repair of the roads they destroy. The present tax is inequitable. It should be so graded that the heavy touring car, which does serious damage, should not escape as at present with exactly the same light tax laid on the small and comparatively harmless runabout."

Chicopee Orders Fire Fighting Machine.

Chicopee, Mass., is to have an automobile fire fighting engine which will be a combination chemical hose and ladder truck. The contract was awarded to the Knox Automobile Co. on Friday, 3d inst. The truck, the first one of its kind, will be installed in the Willimansett section of the city. It will be a 1908 model four cylinder, 40 horsepower, three-speed, air cooled gasolene machine. It is to have a speed of 20 miles an hour in order to get the necessary hill-climbing power and will be built to ascend grades at from five to fifteen miles an hour, according to the percentage of incline.

Its fire-fighting devices will consist of two 25-gallon Halloway chemical engines with 300 feet of hose with two sizes of nozzles; two three-gallon hand extinguishers; 1,000 feet of standard hose, with two sizes of nozzles; one 24-foot extension ladder; 13--foot roof ladder; two of the latest design lanterns; ceiling pike, plaster hook, crowbar, door opener and two firemen's axes. The whole outfit will weigh 7,500 pounds. The wagon will carry two men and three men will be instructed in the Knox factory. The contract price for the machine is \$5,000.

LAW COMPELS VIOLATION OF LAW

So Says a Would-be Law Abiding Jersey Motorist of the Frelinghuysen Act—
His Tale of Transgression.

Answering his own question as to whether the law has a right to make a man a criminal in spite of his own effort to avoid it a member of the New Jersey Automobile and Motor Club gives the following narrative of some of his experiences under the Frelinghuysen law:

"Two years ago, when I first got my car, I had read for months and months previous all the automobile matter I could lay my hands on, as I suppose does every beginner, and I had formed my own opinions. Then I read that in such and such a town one of the prominent motorists, on finding that the law was to be strictly enforced by the local authorities, immediately obtaining a red flag, warned every automobilist who entered the village. Now, in my innocence, I considered this defiance of the law, for the majority of which I had always entertained a great respect, and I at once concluded that when I finally got my machine and learned to drive it, I would demonstrate to my motoring friends, who had declared it to be impossible, how really easy it was for every man to adhere not only to the spirit, but the letter, of the law. My experience may be interesting to some others.

"After I had fairly learned to drive I had my car equipped with a speedometer as a prime requisite in knowing definitely myself that I was well within the speed limit. Then I sallied forth to show the world how law-abiding I could be.

"For this demonstration I selected one of the busiest streets in Newark, although one not actually blocked by the traffic. Keeping a watchful eye on the speedometer, I drove quietly along this thoroughfare, always keeping about a mile or so under the speed limit. The result was astonishing, to me at least.

"First I took to the car tracks, not from any premeditated reason, but by chance. The first thing I knew a trolley car came ambling up behind me and the motorman rang his gong. I glanced at my speedometer, saw I was just about at the limit of the law, and held to the tracks. Frantically the motorman stamped on that bell, then tried the tactics of bringing his car up with a swoop as near as he dared, and attempting to scare me off in that fashion. Having established to my own satisfaction that a blockade of trolleys would soon result if I held to the tracks much longer, I swerved to the right and held my pace.

"Now, this particular street is narrow and there is scarcely more than enough room for one good-sized wagon on each side of the trolley tracks, and the trolley cars themselves run very frequently. What had that to do with the question? you ask. Simply that drivers of carriages, other automobiles, and even light delivery wagons and large trucks, swore at me for blocking the street by my slow going, when, mind you, I was going at the limit the law allowed.

"Several other times I tried this experiment in other parts of the city before I gave up my first ideas as to the justice of the law and acknowledged that if I were to drive an automobile it must make of me a criminal against my own wish.

"To many this may seem a quibble, but to me it seems that there is something immoral in such a state of affairs. When a man learns that he cannot abide by the provisions of any particular law he immediately loses his respect for that act, and for the justice of all laws, and ten to one he will conclude that if he cannot obey some one provision, that the law is all wrong and he has no moral duty to follow in obeying other provisions which are in every way just and really needed for the good of automobilists in general."

Santa Claus with the Bay States.

By the visit of "Santa Claus" to the Bay State Automobile Association on New Year's eve, 31st ult., Boston becomes a rival of Philadelphia in things dilatory. Custom and tradition has long decreed that the visit of this mythical philanthropic saint shall take place on Christmas eve, but he did not reach the Boston automobilists this year until one week later than schedule.

D. B. "Pinkey" Price served as Santa Claus, though what "Pinkey" should want in Philadelphia is beyond explanation. "Bob" Ross and C. E. Wheeler helped hold the heavy bag of presents for all the good little motorists.

J. W. Bowman got a six-cylinder toy bank and E. A. Gilmore was handed a drum with instructions to "beat it." Gilmore took the advice literally and not as implied for instead of running home he remained at the club house and beat a lively funeral march each time a member was called up for his present. Fred O'Brien was a bit confused when he received a number of children's toys, while George Crittenden did not know how to take his gift of a pair of young goggles, a cooling fan, and other commodities. Lucius Tyler, who has figured in non-stop runs, got a tame sheep and a bank for his savings. V. A. Charles has games and toys enough to keep him amused until show time, and Harry Howlett will no longer have to go to Nantucket to shoot rabbits, as "Santa Pinkey" gave him a pair.

As George W. McNear has been a good secretary he was liberally remembered with a number of small though appropriate articles. "Al" Measure received a pair of nice old-fashioned woolen socks to keep him warm while hunting up tire business.

Everybody present got something amusing, and good humor and fun prevailed.

NANTUCKET'S LONE AUTOMOBILE

Though Confined to Railroad Tracks It is
Preparing the Islanders for Progress

—Two Bigger Ones Promised.

Nantucket is becoming progressive in spite of herself. The right little, tight little island has not given up its determination to keep the automobile off the public roads, but it has permitted the Nantucket Central Railroad to operate an automobile locomotive on the rails. This was an experiment on the part of the railroad company, and it has proved so successful that several others are to be added to the equipment.

This railroad is not a big nor a rich one, but Nantucket, although it constitutes one of the counties of Massachusetts, is not a big island. The old whaling port of Nantucket is its one town, and at the other end of the island there is a village named Siasconset, but invariably called 'Sconset. The railroad, 8.50 miles in length, connects the two places, but until the automobile locomotive was introduced early this winter the connection has been only for the summer season. It is doubtful whether the secondhand, narrow gauge steam locomotive-a veteran handed over by the Boston, Revere Beach and Lynn Railroad-which made eight trips daily between Nantucket and 'Sconset during the summer would be equal to more than one daily during the winter.

Not only are the islanders having a winter service, but they are making the Nantucket-Siasconset trip in better time than was possible with the old locomotive. Seventeen miles an hour was the rate of travel until the automobile got on the rails. The experimental car is a small one, with capacity for nine persons, but it is capable of better than seventeen miles an hour. It is the precursor of two larger ones to be built for next summer's travel, each of them to be of 60 horsepower and capable of carrying 35 passengers.

Jail and Prisoner Disappeared.

There is no jail at Elwood, N. J., a place midway between Atlantic City and Philadelphia. There was a temporary one there on Monday last, but it disappeared during the night with a prisoner. He was a chauffeur who had been placed in durance for refusing to submit to a ruling made by Justice of the Peace Carver, who is the terror of speed loving automobilists in that section. The constable had placed him in a freight car, which stood on a siding and made him comfortable for the night with a cot, and then went home to his own bed. A freight train picked up the car during the night and took it to Camden where the prisoner narrowly escaped arrest for stealing a ride. He got clear by the aid of a dollar, and wired Justice Carver saying, "Trip pleasant; arrived safely."



The Week's Patents.

867,474. Device for Inflating Tires, etc. Robert H. Campbell, Edmonton, England, assignor to Aerators Limited, Angel Road, Edmonton, England. Filed Sept. 20, 1906. Serial No. 336,730.

1. A device for inflating pneumatic tires and for other purposes; the said device consisting of a cylinder provided with a valve and an attachment provided at one end with means for opening the valve and at the other end with means for attachment to the nozzle of the inlet valve of the tire, or the equivalent, to which gas is to be supplied, the said attachment also being provided with a branch therefrom carrying a pressure gauge.

867,503. Automobile Sleigh. Frederick Hartje, St. Thomas, N. D. Filed May 24, 1907. Serial No. 375,379.

1. In an automobile sleigh, a series of drive wheels adapted to engage the surface traversed, arms supporting the shaft of said drive wheels, a transverse bar to which the inner ends of said arms are connected, means for rocking said arms to raise or lower said shaft and drive wheels, a sleeve encircling said transverse bar, a motor, and connections between said motor and sleeve and said sleeve and drive wheel shaft for rotating the latter.

867,515. Tire Protecting Device. Leonard H. Kinnard, Harrisburg, Pa., assignor of one-half to Rollin S. Chamberlin, Harrisburg, Pa. Filed Dec. 8, 1904. Serial No. 235,932.

1. A tire protecting device composed of a shoe in which the tire fits, a stay consisting of a stiff endless ring fastened only to the shoe at one edge thereof, another similar stay, and a fastening connecting the shoe at its other edge with the latter stay, said fastening being adjustable to draw the edge of the shoe towards the stay.

867,588. Rim and Tire Construction for Vehicle Wheels. Montford P. Morrison, Atlanta, Ga. Filed Nov. 5, 1906. Serial No. 341,987.

1. A rim and tire construction for vehicles, comprising a rim member provided in its outer face with a deep annular channel the walls of which are parallel, said rim member being provided at the opposite sides with two projecting parallel annular flanges between which are deep annular grooves the walls of which are parallel, an elastic device placed in said channel, and an annular tire member provided with a central inwardly directed annular portion which fits in and is movable in said channel and which bears on said elastic device and the side walls of which are parallel, said tire member being provided at the opposite sides of said inwardly directed annular portion with deep annular grooves the side walls of which are parellel, said grooves being adapted to receive the inner flanges of the rim member, and said tire member being also provided at its opposite sides with inwardly directed parallel annular flanges adapted to enter the grooves formed by the flanges at the opposite sides of the rim member and the walls of which are parallel, said tire member being free to move in and on said rim member.

867,600. Vehicle Tire. Albert D. Ray, Cleveland, Ohio. Filed Nov. 7, 1906. Serial No. 342,362.

1. A tire comprising a flanged rim having a hole therein, a casing on the rim having a split base with shoulders at the sides engagable with the flanges, a flexible band

extending lengthwise around within the casing upon the base thereof and having flexible ends extending through the hole, means to fasten said ends, and a resilient filler within the casing.

867,604. Carburetter. William F. Rothe, East St. Louis, Ill. Filed Sept. 18, 1905. Serial No. 278.858.

1. In a carburetter, a cylindrical member provided with an interiorly arranged spiral passageway, means whereby oil s discharged into the cylindrical member in front of the spiral passageway, means whereby the discharge of oil into the cylindrical member is regulated, and an adjustable member arranged beneath the oil inlet to receive the excess discharge of oil; substantially as specified.

867,605. Fuel Valve Controller for Hy-

867,605. Fuel Valve Controller for Hydro-Carbon Engines. William F. Rothe, East St. Louis, Ill. Filed Jan. 12, 1906. Serial No. 295 785.

1. In a device of the class described, the combination with a carburetter, of a valve for controlling the supply of hydrocarbon to the carburetter, the stem of which is screw threaded; a beveled pinion fixed on the upper end of the valve stem, a horizontally arranged shaft, beveled pinions on each end thereof one of which meshes with the pinion on the valve stem, a vertically arranged shaft, a beveled pinion on the lower end thereof which meshes with the pinion on the opposite end of the horizontal shaft, angle frames loosely mounted on the ends of the shafts around the meshing beveled pinions; and an operating handle fixed on the upper end of the vertical shaft; substantially as specified.

867,608. Photographer's Car. Jean Jean Schmidt, Frankfort-on-the-Main, Germany. Filed Aug. 16, 1906. Serial No. 330,-934

1. The combination with a photographer's car and a source of electricity carried thereon, of a drum on said car, and a conductor wound on said drum and connected with said source of electricity and also adapted to be connected to a lighting device, substantially as and for the purpose described.

867,614. Wheel. Benjamin C. Seaton, St. Louis, Mo. Filed June 7, 1906. Serial No. 320,669.

1. A wheel comprising a felly, an outer rim having a tread connected thereto, a plurality of independent arms formed separate from the felly to which they are connected and arranged alternately on the opposite sides thereof, independent arms formed separate from the outer rim to which they are connected and arranged alternately on the opposite sides thereof, transversely arranged tension springs connected to the arms on the felly and outer rim that are located opposite each other, and co-operating means on the outer rim and the arms connected thereto for preventing said arms from twisting; substantially as described.

867,616. Pump. Stephen G. Skinner, Chicago, Ill. Filed March 30, 1905. Serial No. 262 838

In a pump of the described class, the combination of a base; inner and outer stationary cylinders rigidly connected therewith; a tubular piston rod extending downwardly between the upper ends of the cylinders; a piston on the lower end of said rod having a down-turned cup leather working on the inner surface of the outer cylinder; and a piston on the inner cylinder having an up-turned cup leather working on the

inner surface of the tubular piston rod, said piston rod being provided with a valved passage leading to the interior of the rod from below the first mentioned piston, and said inner stationary cylinder being provided with a valved passage leading to the interior of the inner cylinder from above the other piston.

867,627. Induction Coil Apparatus. Ernest C. Wilcox, Meriden, Conn., assignor to The Connecticut Telephone and Electric Company, Incorporated, a Connecticut Corporation. Filed June 19,1907. Serial No. 379,731.

1. In an ignition system, the combination of an ignition device, a source of primary current, an induction device having its primary in circuit with the source of current and having its secondary in circuit with the ignition device, a vibrator in the primary circuit and having an adjustable member, a condenser shunted across the terminals of the vibrator and proportioned to the normal current consumption, and means for indicating the correct adjustment of the vibrator at the normal current consumption.

867,710. Wheel. William Eichers, Minneapolis, Minn. Filed Jan. 7, 1907. Serial No. 351,063.

1. A wheel comprising a rim and tire, a ring of channel bar iron concentric with said rim and having its flanges extending inwardly toward the said hub, a hub within said ring having outwardly extending annular flanges, the space between said flanges corresponding substantially to the width of said ring, bolts connecting said flanges, coiled springs having their inner ends connected to said bolts and their outer ends adjustably connected to said ring, and plates secured on the flanges of said ring and having sliding contact with the flanges on said hub, substantially as described.

867,713. Valve for Explosive Engines. Joseph S. Elverson, Catasauqua, Pa. Filed Feb. 6, 1907. Serial No. 355,977.

1. In an explosive engine, a cylinder, a head for closing the cylinder at one end and having a semi-circular opening, a valve having a semi-circular opening, reversed in respect to the opening of said head, said openings arranged when brought with their curved portions into alignment with each other to form combined, an opening of gradually increasing size.

867,717. Tire Covering. George R. Eukers and Robert H. Atcheson, Chicopee, Mass. Filed April 3, 1906. Serial No. 309,-583.

1. A tire covering consisting of a body comprising a plurality of circularly coursed bands arranged to conform to the shape of an annular trough, and a multiplicity of metallic link-like tubes engaged with and connecting each of said bands with another thereof which is transversely there beyond, said tubes being provided in such number and having such proximate arrangement as to produce a flexible metallic tread and protective portion for the appliance.

867,748. Mechanical Movement. William B. Norton, Detroit, Mich. Filed Oct. 16, 1905. Serial No. 282,912.

1. In a mechanical movement for converting motion, in combination with a plurality of radially disposed cylinders, a plurality of pistons therefor, connecting rods pivoted to said pistons, a shaft central to said cylinders, a crank on said shaft, a wrist plate having a rotating connection with said crank and provided with sockets in which the ends of said connecting rods engage,

the boundaries of said sockets being adapted to limit oscillation of the plate with respect to the several connecting rods, substantially as described.

867,756. Elastic Tire. Jacob W. Rock, Akron, Ohio. Filed Aug. 13, 1906. Serial No. 330,352.

1. An elastic vehicle tire provided with a plurality of holes, said holes extending from the tread portion thereof inwardly and arranged at an angle to the radii of the wheel on which said tire is mounted.

867,765. Automatic Steering Mechanism

for Vehicles. William H. Strickler, Chicago, Ill. Filed Feb. 19, 1907. Serial No. 358,281.

1. The combination with a car having independently pivoted wheels, and means including a laterally movable part for connecting them, of automatic steering me-chanism having a fixed guide, a runner en-gaging said guide and means for connecting the runner to said laterally movable

867,790. Attachment for Automobiles. Harry J. Carr, Sumter, S. C. Filed July 2, 1907. Serial No. 381,859.

1. The automatic attachment herein described, comprising the drum for applica-tion to a cranking shaft, and having a longitudinal bore or opening to receive the said shaft, a transverse opening intersecting the said longitudinal bore or opening, and ratcheted at its outer end for engagement by a crank handle, substantially as set forth.

867,795. Automatic Engine Starter. Clyde J. Coleman, New York, N. Y., assignor to Conrad Hubert, New York, N. Y. Filed Feb. 26, 1906. Serial No. 303,130.

1. An engine starter comprising a powerstoring device, an engine actuating member normally connected to rotate with the en-gine, means for rotatably connecting the power storing device and the engine actuating member to start the engine, said means being constructed and operating to operatively engage the engine actuating member only when the power starting device tends to rotate faster than the engine and being movable out of engagement by the relative rotation of the engine actuating member during the normal operation of the engine, and frictional means for holding said connecting means out of engagement until the starter is again thrown into operation to start the engine.

867,796. Engine Starter. Clyde J. Coleman, New York, N. Y., assignor to Conrad Hubert, New York, N. Y. Filed Nov. 12, 1906. Serial No. 342,999.

1. In a starter for engines, the combination of a hydraulic motor, means engageable only in one direction of movement for connecting the motor to the engine to start the engine, a source of motive liquid under pressure connected to the motor, and means for returning the used motive liquid to its

867,797. Engine Starter. Clyde J. Coleman, New York, N. Y., assignor to Conrad Hubert, New York, N. Y. Filed March 13, 1907. Serial No. 362,102.

1. In an engine starter for multiple cylinder internal combustion engines, the combination of a carburetter, fluid carrying connections from the dutlet of the carburetter to the inlets of the respective cylinders, manually actuatable means for concurrently opening an outlet from each cylinder, an atmospheric air inlet for the carburetter, means for closing the atmospheric air inlet, a source of compressed air communicating with the carburetter, and a manually actuatable valve in control of such communi-

867,851. Automobile Tire. George G. Sullivan, Buffalo, N. Y. Filed Nov. 13, 1906. Serial No. 343,183.

A link shield arranged between layers of rubber fabric and provided with rings connected therewith, partially surrounding rubber cores.

Edmond M. J. 867,859. Carburetter. Weinat and Joseph Bogey, Chicago, Ill., assignors, by mesne assignment, of threefourths to Andrew A. Brock, Chicago, Ill. Filed April 7, 1905. Serial No. 254,310.

1. In a carburetter, an oil reservoir containing a float and an inlet valve governed

AJAX WRAPPED TIRES **CUARANTEED FOR** 5.000 MILES RIDING

Write for copy of Guarantee-Dept. A.

AJAX-GRIEB RUBBER CO., General Office, 57th Street and Broadway, New AGENTS IN ALL LARGE CITIES.

Address Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City. Western Inquiries arford Motor Car Co. of Cleveland 1372 East 12th St., Cleveland.



Hew Are Your Batteries?

A CONNECTICUT VOLT AMMETER

will tell you. Guaranteed, and the price is right, send for catalogue and trade dis-

Volt Ammeter, 28.00, Ammeter only, \$4.00

CONNECTICUT TELEPHONE and ELECTRIC CO., Inc MERIDEN, CONN



THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO. INDIANAPOLIS, IND. (Estab. 1851)

WANTS AND FOR SALE

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line,

FOR SALE-Model K Cadillac runabout, excellent condition, complete with top, lamps and generator. THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

A BARGAIN-1907 20 H. P. 4-cylinder Model "G" Cadillac runabout, best of condition; demonstration at any time. Address MORGAN & WRIGHT, 214 W. 47th St., New York City.

FOR SALE—Absolute closing out sale of the largest stock of new and sec-ond-hand automobiles in the United States. Write for Clearance Sale List No. 21. Now is the time to buy. ROCHESTER AUTOMOBILE CO., Jos. J. Mandery, Prop'r., Rochester, N. Y.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can scason. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

Н

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY Members A. L. A. M. KOKOMO, IND.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway-CHICAGO, 1702 Michigan Av.

X



Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

"THE BEST IN **MOTOR CARS**"

Palmer & Singer Mig. Co. 1619 Broadway, New York



EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St. CHICAGO—20 LaSalle Street and 1615 Wabash Avenue. FOBES AUTO SUPPLY CO., Portland, Oregon. PENN AUTO GOODS CO., Denver, Colo. FOBES AUTO SUPPLY CO., Seattle, Washington. PENN AUTO SUPPLY CO., Philadelphia, Pa. WAITE AUTO SUPPLY CO., Providence, R. I.

thereby, and having an outlet formed by an annular series of multiplex small passages, in combination with an annular air inlet valve for the carburetter surrounding said reservoir.

867,887. Means for Operating Fare and Distance Indicators. Otto Kuntzen, Berlin, Germany. Filed Oct. 19, 1905. Serial No. 283,543.

In combination with an indicator, a cam wheel adapted to be actuated from the wheel of a vehicle, a sliding rod provided with shoulders between which said cam wheel revolves and by means of which it imparts a positive to and from movement to the rod in both directions, and means whereby such motion is transmitted from the rod to the indicator.

867,988. Armor for Tires. Charles P. Mays, Washington, D. C. Filed July 13, 1906. Serial No. 326,065.

1. An armor for tires, consisting of a series of independent protecting sections, projections formed on the sides of said sections, segmental bands extending completely around the sides of the tire and each provided with a groove in its side for engaging the projections to hold the protecting sections in position, each of said segments being of a length to engage the projections on a plurality of the sections.

868,014. Automobile. Edmund W. Roberts, Clyde, Ohio. Filed March 17, 1905. Serial No. 250,503.

1. In an automobile, the combination with running gear comprising a driving wheel, of a combined internal combustion and compressed fluid multi-cylinder engine in permanent driving connection with such driving wheel, said engine comprising cylinders serving normally as cylinders of an internal combustion engine and provided with valves and valve gear for admitting fluid under pressure to said cylinders to operate the engine as a self-starting compressed fluid motor, the cylinders and associated parts and valve gear arranged to produce at least three impulses per revolution when operated as a compressed fluid engine, and means for supplying fluid under pressure to said engine comprising a reservoir, a compressor, an auxiliary internal combustion driving engine therefor, and automatic controlling means operated by rise and fall of pressure in said reservoir and controlling the operation of said compressor engine and comprising automatic starting means therefor.

868,047. Vehicle Wheel. George S. Whiteley, Baltimore, Md. Filed April 18, 1906. Serial No. 312,375.

1. In a vehicle wheel the combination

of an inner wheel having spokes and an iron rim, an outer wheel having an iron rim and a rubber tire and between said wheels a series of S-shaped springs having on their inner end a spring plate, secured thereto and a pivot bolt between said spring and spring plate, and side plates receiving the ends of the pivot bolt.

868,079. Tire for Wheels. Herbert B. Ewbank, Jr., New York, N. Y., assignor to Harry A. Taylor, New York, N. Y. Filed July 25, 1906. Serial No. 327,615.

1. A wheel having on its periphery a central vertical annular flange having concave seats at its opposite sides, a series of outwardly bowed transverse plate springs arranged around the wheel with their adjoining ends coiled and disposed at opposite sides of said flange in sliding engagement with said seats, means retaining said springs and guiding them in their sliding movements against said seats, and an exterior rubber tire inclosing said springs and secured to the wheel; substantially as set forth

868,081. Controller for Motor Vehicles. Clark E. Frear, Lake Winola, Pa. Filed Jan. 2, 1907. Serial No. 350,458.

1. A controller for motor vehicles, having a pivotally mounted wheel whose hub has an external circumferential groove upon its inner end, a controller plate movably mounted upon and engaging the axle of said vehicle and provided with an inwardly projecting flange engaging said groove, and means for shifting said plate.

868,105. Gage for Rolls in Roller Bearings. Charles S. Lockwood, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Oct. 25, 1906. Serial No. 340,434.

1. A sheet metal cage, for hollow bearing rolls, having annular heads at the ends, integral guide bars connecting such heads and integral flexible prongs projected from at least one of the heads between the guidebars to penetrate the rolls and hold them in place.

868,202. Internal Combustion Engine. Norman Macbeth, St. Annes-on-the-Sea, England. Filed March 6, 1907. Serial No. 360,961.

1. An internal combustion engine having parallel explosion cylinders, admission ports in one cylinder, exhaust ports in the other cylinder, a common combustion space, a centrally disposed air and fuel charging pump located nearer the crank shaft, pistons in said explosion cylinders and working parts, said explosion cylinder cranks pistons

and working parts being set at opposite angles to and balancing the charging pump crank piston and working parts for the purposes and as set forth.

868,207. Resilient Tired Wheel for Automobiles and Other Vehicles. Abram C. Monfort, Providence, R. I. Filed May 25, 1906. Serial No.

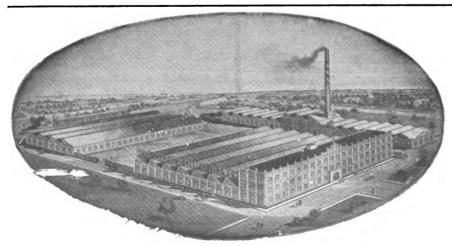
1. In a resilient tired wheel for automobiles and other self-propelled vehicles, the combination with a suitably mounted rim, a pair of oppositely disposed annular plates rigidly secured to and extending radially beyond the rim, and an annular pneumatic or inflatable tire located between said plates and seated in the outer periphery of said rim, of a plurality of radially arranged independently movable and laterally separated inelastic sections having their inner or lower sides bearing against and being supported by said tire, means for limiting the movements of said sections, the ends of the latter transversely of the wheel being constructed so as to form narrow spaces between them and the adjacent inner faces of said plates, an annular flexible and compressible traction tire member in direct contact with the outer periphery of said sections provided with integral side flanges extending downwardly into the said narrow spaces, and means for maintaining the traction tire in position upon said section.

868,208. Device for Preventing Slipping of Motor Driven Vehicles. Alban S. Moore, London, England. Filed Aug. 17, 1906. Serial No. 331,080.

1. Apparatus for preventing side slipping or skidding of motor driven road vehicles, wherein an additional rearward wheel, driven from a motor, is coupled to and operated by the steering mechanism, so that it will be caused to change to any required extent, the direction of its motion and gripping power on the road surface, simultaneously with, and approximately corresponding to the direction of travel of the steering wheel, or wheels, of the car.

868,304. Hydraulic Clutch and Transmission Device. Clarence H. Tingley, Unionville, Mo. Filed Nov. 30, 1906. Serial No. 345,745.

1. The combination in a clutch, of a stationary fluid reservoir, two relatively rotatable members having contiguous ends inclosed in said reservoir, pump pistons carried by one member in eccentric relation thereto, pulp cylinders carried by the other member and equi-distantly located with relation to its axis, fluid inlet ducts from the reservoir to the pump cylinders, outlet ducts from the pump cylinders to the reservoir, and means for constructing the outlet ducts to regulate the degree of clutching action.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park CLEVELAND, OHIO, U.S.A.





\$375 and Upwards

The automobile for winter use. Air cooled —no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Bex No. 250 AUBURN, IND.



"YULCAN" Sta-Rite Spark Piugs

"KEEPS THE LID ON."

On Maxwells, Mitchells, Autocars, Americans, Glides, etc., in their contests. They'll do the same for you.

Send for sample set.

THE R. E. HARDY CO., 88 Water St., New York City



Studebaker Autemobi'e Co., South Bend, Indjana

DRAGON

Touring Car \$2100

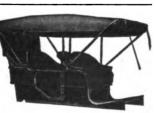
Roadster \$ 1850

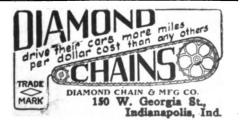
TWO "HAPPY MEDIUM" CARS. Not too heavy—not too light, Not too costly—price just right.

DRACON AUTOMOBILE CO. 50th, 31st and Chestnut Sts., Philadelphia, Pa.

TWOOD MFC. CO., Amesbury, Mass.

Springfield Top (Pat. 1895) ALUMINUM BODIES. Springfield Metal Body Co...





SMITH AUTOMOBILE PARTS.



STEERING COLUMNS.

A. O. SMITH COMPANY

243 Clinton St.,

JACKSON AUTOMOBILE CO..

Milwaukee, Wis.

Jackson, Mich.

The Pioneer Makers of Automobile Parts.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep-No Hill Too Steep." 2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars. 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,000.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STREL CO., Cleveland, Ohio.

ALUMINUM BODIES J. M. QUINBY & CO. EST. 1834 Carriage Builders, MEWARK, N. J.

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed One Year

WITHERBEE IGNITER CO.,

541 West 434 St., New York

STANDARD BEARING COMPANY ROLLER

Manufacturers of Steel, Brass and Bronze Balls, Ball Bearings, Roller Bearings and Automobile Axles Write for New Automobile Catalogue with full par-ticulars of

THE STANDARD TRANSMISSION AXLE.



\$250 "SUCCESS" AUTOMOBILE

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy.
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Co., Inc. 531 De Balivere Ave., St. Louis, Me.

McCORD LUBRICATORS — RADIATORS Marks of a Good Motor Car"

MCKIM COPPER-ASBESTOS CASKETS

McCCRD & COMPANY

NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street. New York

Enclosed find \$2.00 for which enter my subscription to

The Motor World

for one year,	commencing	with	the	izsue	of	
Name					_	

Address

CIMIOTTI GARAGE

Now York City

Broadway and 110th St.

Run as a garage ought to be run. Personal attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try us.

Tel. 2686 River.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

LASCOCOLAS FRONT
Simple, effective, correctly designed Mahogany
finish wood frame, trimmed in brass, 3-16 crystal
plates, steel stay rods, bottom of frame shaped to
dash of any standard automobile. Can be sttached easily and quickly.
We make the London Tops. Write for details
and prices.

LONDON AUTO SUPPLY CO. CHICAGO 1233 Michigan Avenue

BRISCOE RADIATORS
Honeycomb, Flat Tube, Round Tube,
Staggered Tube, Film Tube; horizontal or
vertical flow; with or without casing; with
or without pump.
Fenders, Tanks, Hoods also made. Send
for catalog.
Old Radiators Repaired. Send to nearest factory.

BRISCOE MFG. CO.

DETROIT, MICH.

NEWARK, N. J.

Apperson Model M \$2750

35 H. P., Double Ignition APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



The Baldwin Chain Company

— MAKE -Automobile Chains Sprockets, Spur and Bevel Gears.

Baldwin Chain & Mfg. Co.,

Logan 1908 Model T One Ton Truck

A truck equipped with a four cylinder air cooled 20 H. P. motor, built for service and fitted to carry its load day in and day out under all conditions. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE. OHIO.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

EISEMANN-LAVALETTE Magnetos

LAVELETTE & CO., New York

112 W. 42d St.,

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, M. Y.

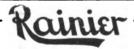
STAMPED PARTS

FOR AUTOMOBILES THE CROSBY COMPANY Buffale, New Yerk

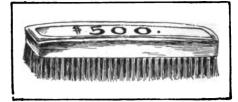


SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akron, Ohio

Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?



"The Pullman of Motor Cars" 1908 Models Ready for Delivery RAINIER MOTOR CAR CO., Broadway and 50th St., New York



THE LAMBERT 18 "Friction Flyer"

Write for catalogue describing our full line.

The Buckeye Mfg. Co.,

Anderson, Ind.



CONTINENTAL CAOUTCHOUC COMPANY 43 Warren Street. New York Representation everywhere.
"Keep your eye on Continentals"

FRANCE ENGLAND AMERICA

MICHELIN TIRE CO..

Militown, N. J.



For catalogues, address THE CONTINENTAL AUTO MFG. CO.

TRUFFAULT-HARTFORD Trade
SHOCK ABSORBER
Mark

Second and Comforts

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.
Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO.,

E. V. Hartford, Pres.

66 Vestry St., New York

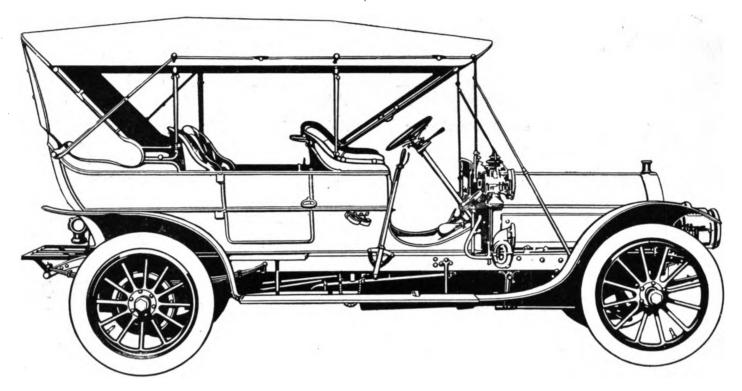


Nuts That Require Tightening After considerable use the bolts driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprockets out of line.—From "Motor World," August 8, '07. **Use Columbia Lock Nuts**

COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.







The Great Arrow SIX-Cylinder

THE GREAT ARROW is now being built with six cylinders, because we believe that it is the next step in the development of the touring car. The advance from four cylinders to six is no more radical than the advance from two cylinders to four. Because we believe that six cylinders will give to a car greater efficiency, smoothness and comfort, we have put six cylinders in the GREAT ARROW for the coming season. We did not do this until we tried out the sixcylinder idea very carefully.

IT is possible to state in print the manifest advantages of six cylinders over four, but no statement, however technical or however complete, will be as convincing as an actual demonstration of a six-cylinder car. The best description of the effect of riding in a car driven by six cylinders is that it is like coasting down a fifteen per cent. grade with the clutch thrown out. It is the nearest thing to gliding that has ever been produced by machinery, so much so that we believe that the sixcylinder is the nearest thing to a perfect application of power for a touring car that has yet been devised by engineers.

```
4-cylinder Great Arrow, 30 H. P., Price, $4,000
   HERE ARE THE
                            4-cylinder Great Arrow, 40 H. P., Price, $5,000
1908 TOURING CARS 6-cylinder Great Arrow, 40 H. P., Price, $5,500 6-cylinder Great Arrow, 60 H. P., Price, $6,500
```

THE GEORGE N. PIERCE COMPANY,

(Members Association of Licensed)

Automobile Manufacturers

BUFFALO, N. Y.

PIERCE DEALERS

Boston, Mass.

New York, N. Y.
Chicago, Ill.
Pittsburg, Pa.
I hiladelphia, Pa.
San Francisco, Cal.
San Francisco, Cal.
Fortland, Ore.
Seattle, Wash.
Los Angeles, Cal.
Haltimore, Md.
Buffalo, N. Y.
Cleveland, Ohio.
Davenport, Iowa
Denver, Colo.
Davenport, Iowa
Denver, Colo.
Tom Botterill
Detroit, Mich.
Hartford, Conn.
Howa Auto & Tire Co.
Howa Auto & Tire Co.
Tom Botterill
J. P. Schneider
Hartford, Conn.
Howa Constant Miner Garage Co.
Howa Conston Motor Car Co.
Louisville, Ky.
Mexico City, Mexico

Mohler & De Gress

PIERCE

745 Boylston Street
233 West 54th Streets
Haum & Beatty Streets
Golden Gate Av. & Gough St.
762 Golden Gate Avenue
763 Golden Gate Avenue
763 South Main Street
1643 California Street
1643 Mains Street
1640 Main Street
1643 California Street
1643 Califo

Milwaukee, Wia.
Minneapolia, Minn.
Montreal, Can.
Newark, N. J.
Ottawa, Canada.
Pittsfield, Mass.
Portland, Me.
L'rovidence, R. I.
Rochester, N. Y.
Salt Lake City, Utah.
Scranton, Pa.
Springfield, Mass.
St. Louis, Mo.
Titusville, Pa.
Toronto, Ont.
Troy, N. Y.
Utica, N. Y.
Binghamton, N. Y.
Mobile, Ala.
Omaha, Neb.
Richmond, Va.
aly), 22 Avenue de la C.

Hibbard Auto. Co.
Pence Automobile Co.
Wilson Automobile Co.
Eilis Motor Car Co.
Wilson & Co.
Central Auto. Station Co.
F. A. Nickerson Co.
I. Co.
T. Paris, France, N. S. Goodsill (parts only), 22 Avenue de la Grand Armee,

7 Wisconsin Street 7 Hennepin Avenue 7 Craig Street, West 2 Halsey Street 2 Bank Street West Street 53 West Street
542 Congress Street
512 Industrial Trust Bldg
21 Plymouth Avenue
62 W. Third. South

461 Worthington Street 4701 Washington Blvd. 16 N. Franklin Street 24 Temperance Street 22 Fourth Street

172 State Street 105 S. Conception Street 2046-2048 Franklin Street 1607 West Broad Street



This Matter of Reducing Tire Expense

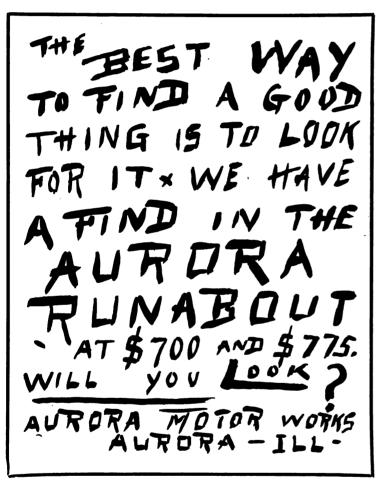
has passed the theory stage with users of

MORGAN & WRIGHT TIRES

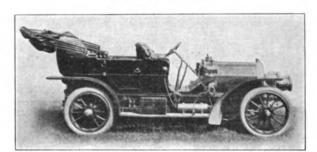
The other day a man wrote us from Pennsylvania: "I have cut my tire expense in half by the use of your tires." Not all converts to Morgan & Wright tires make as big a saving as this man did, but nine out of ten of them save enough to justify making the change.

MORGAN & WRIGHT, Detroit

Branches, Agencies or Dealers Everywhere.







\$2800

With Magneto, \$3000

Touring Car, Roadster, Touring Roadster, Limousine. Valve-in-head Motor, Chrome Nickel Steel, Annular Bearings.

Pennsylvania Auto Motor Co., Bryn Mawr, Pa.

PENNSYLVANIA DISTRIBUTORS.

Los Angeles, Cal.—Greer-Robbins Company, 1501-1505 South Main St. San Francisco, Cal.—City Hall Automobile Company, 66 Fulton St. Boston, Mass.—Frederick E. Randall. Company, 245 Columbus Ave. Chicago, Ill.—B. C. Hamilton, 1218-1220 Michigan Ave. Providence, R. I.—Pennsylvania Motor Car Agency, 133 Washington St. Denver, Col.—Denver Omnibus & Cab Company.

Kansas City, Mo.—Auto-Motor Company, 1122-1124 East 15th St. Pittsburg, Pa.—Bellefield Motor Company, 1341-16-18 Henry St. Brooklyn, N. Y.—Charles F. Batt, 1378 Bedford Ave.

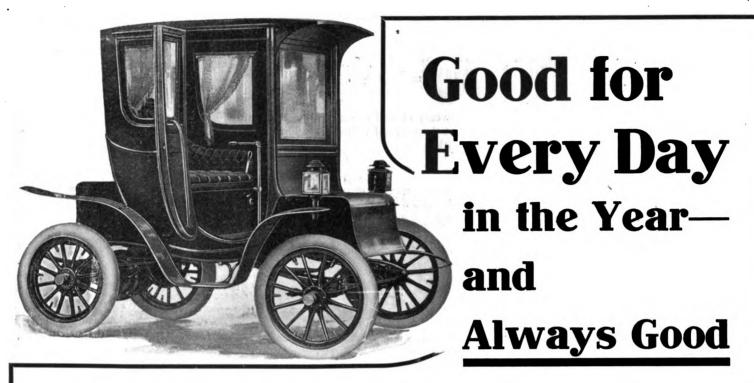
New York City—Archer & Company, 1597 Broadway.

Spokane, Wash.—Dulmage-Rose Automobile Company, 1212 Second Ave. Philadelphia, Pa.—West-Stillman Motor Car Company, 153 No. Broad St. Baltimore, Md.—Rice's Garage, North & Madison Aves.

St. Louis, Mo.—Lakedel Automobile Company, 5143 Delmar Boulevard. Buffalo, N. Y.—Brunn's Carriage Manufactory, 1140 Main St.



Combines Proved Reliability With Increased Efficiency and Low Cost of Up-Keep



WINTER or Summer, Fall or Spring, rain or snow—why shouldn't the dealer enjoy remarkable—almost phenomenal sales—of this remarkable car? What vehicle appeals more to women who demand style, comfort, safety and convenience? What electric vehicle of any other make combines all the good points of this

Pope-Waverley Model 70-C Victoria Coupe?

"The electric is the simplest of all automobiles—the Pope-Waverley is the simplest of all electrics."

We want every dealer in the country to know the masterpiece in construction of the largest Electric Vehicle Manufactory—we want to illustrate how the heavy plate glass windows may be raised or lowered at will—within the doors—how the front window swings inward affording perfect ventilation—how the beautiful upholstering and hardware leave nothing to be desired.

We want to show every dealer how the entire top may be easily and readily removed without detracting in a single instance from the symmetry and completeness of either type.

Why not write for our complete catalogue and an interesting, instructive little booklet called "Profitable Electric Garaging?" We'll send it to you postpaid at once.

The Pope Motor Car Co., Waverley Indianapolis, Ind.



The Anti-Fatigue Car

It never grows weary of well doing. All are beginning now to realize what the users of it and its builders always have known—that the



American Locomotive Motor Car

is the "greatest touring car in the world, bar none." Tourists boast that with this machine they can always keep their schedule and those who have driven it farthest, say:

"IT STAYS NEW"

Imported Materials.

American Workmanship.

Vanadium, "the anti-fatigue metal," is in ALL its steel and iron.

What lasts best. is best.

The energies and backing of a \$50,000,000 company are behind it.

AMERICAN LOCOMOTIVE AUTOMOBILE COMPANY

1886 BROADWAY, NEW YORK

Factory, Providence, R. L.

AMERICAN LOCOMOTIVE AUTOMOBILE AGENCY Pittsburg

PARK Sq. AUTO STATION Boston W. W. SHAW CO.

BERGDOLL MOTOR CAR Co. Philadelphia, Pa.



A NEW SENSATION

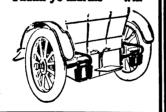
Equip your car with

Supplementary Spiral Springs

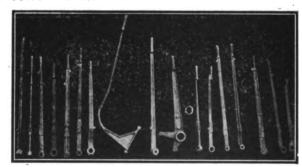
and notice the difference. No johts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis New York Branch, 52 West 67th Street



PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE



SIMPLE AND ABSOLUTELY AIR TIGHT

¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

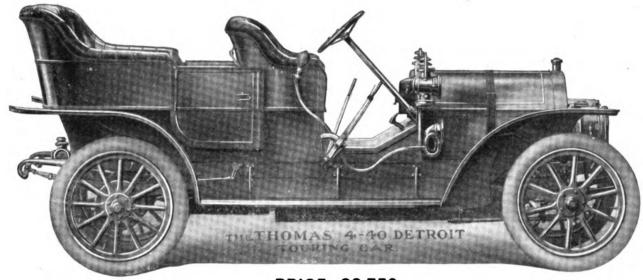
Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tira Manufacturers

Manufactured by A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York

THOMAS 1908

A complete line of Motor Cars of the highest quality possible in Design, Material and Workmanship. They will do what you wish your car could do



PRICE, \$2,750

Thomas 4-20 Towncar

The original Towncar, designed for City and Suburban use exclusively. Beautiful bodies, quiet operation; low cost of maintenance. The Society Car.

Thomas 4-40 Detroit

Cest of all shaft-drive cars. In power, speed, hill-climbing, and reliability the Thomas Detroit leads the five passenger class.

Thomas 4-60 Flyer

Winner of hundreds of contests of speed, hill-climbing, reliability, and endurance. Has more records than any American car. This year improved, enlarged, and refined.

Thomas 6-70 Special

The six-cylinder model of the Thomas Flyer, built by America's pioneer six-cylinder builders. The greatest car in America in speed, size, reliability and refinement.

Thomas Cars Succeed

E. R. THOMAS MOTOR COMPANY

Member A. L. A. M.

Buffalo.

I Want You To Know Why

Is The Car For You



20 H. P .- \$1,450 fully equipped.

Motor-car value can only cost about so much-after that you're paying fancy prices for superfluous horsepower that swells your gasoline, oil and repair bills—that
you cannot utilize, and keep within the law.

The "Maxwell" gives one full dollar's worth of car
value for every dollar it costs.

It does not boast high horse-power, but delivers on the road right up to its rated horse-power.

The "Maxwell" Tourabout is a 14 horse-power car; the double cylinder Touring Car, 20 horse-power, and the new 4 cylinder Touring Car, 24 horse-power. In relation to the weight of these cars, this is just enough more than you need, so that you always have "something up your sleeve for emergencies."

No cars at any price have ever equalled the "Maxwell"

records for efficiency and reliability.

No car of efficiency is so simple of operation or so inexpensively maintained.

The features which the "Maxwell" originated, and which motor-car manufacturers have since adopted, are alone sufficient to establish its superiority—The "Maxwell" Multiple-Disc Clutch, Three Point Suspension of Power Plant and Transmission, Single-Unit Construction of Engine Case and Transmission Housing, Pumpless Thermo-syphon Cooling System, Indestructible Metal Rodies

The "Maxwell" Tourabout costs \$825, the 20 H. P. Touring Car, \$1,450, and the 24 H. P. Touring Car \$1,750.

Considering "Maxwell" prices, the "Maxwell" records and the consensus of opinion of the 10,000 owners of "Maxwell" cars, can you think of one good reason why you should buy anything but a "Maxwell?"

Dery Priscag Prosident.

Maxwell-Briscoe Motor Company

Members A. M. C. M. A.

Tarrytown, New York

FACTORIES:

Tarrytown, N. Y. Pawtucket, R. I.

New Castle, Ind. Chicago, Ill.

DEALERS IN ALL LARGE CITIES

ADVICE TO TIRE BUYERS

WHENEVER a tire salesman tells you that the 5,000 mile guarantee on Ajax Wrapped Tread Tires "means nothing" ask him why, then, he cannot give the same guarantee on the tire HE is selling.

Also. ask him. how the makers of Ajax Tires could have increased their business 5.0 per cent. in 13 months on a reputation built upon a "worthless" guarantee.

And then, inquire if he can point out anyone who has found the Ajax guarantee to be anything but a SQUARE DEAL.

WRAPPED TREAD TIRES

Guaranteed for 5,000 miles riding -and we mean it.

AJAX-GRIEB RUBBER CO.

Gen'l Office, N. E. Corner 57th Street and Broadway, New York

Factories, Trenton, N. J.

BRANCHES:

New York, 1776 Broadway. Boston, 819-A Boylston St. Chicago, 1418 Michigan Ave. Detroit, 743 Woodward Ave.

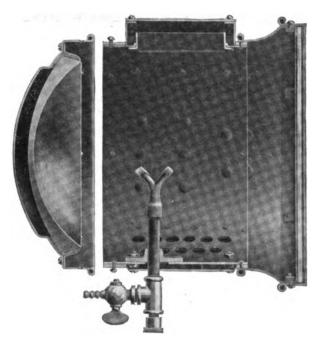
Denver, 1529 Cleveland Place. Seattle, 1102 Broadway. San Francisco, 460 Golden Gate Ave. Los Angeles, 1040 S. Main St.

AGENCIES:

Baltimore, 20 St. Paul St.
Philadelphia, 1413 Race St.
Washington, D. C., 602-604 E St.
N. W.
Pittsburg, 201 Wood St.
Indianapolis, Ind., Fisher Automobile Co.
St. Louis, 3948 Olive St.
Jacksonville, Fla., 317 W.
Buffalo, N. Y., Joseph Straus & Sons Co.

AGENCIES:

Kansas City, Mo., Maxwell-Briscoe Auto Co.
Dayton, O., Borderwish & Glancy Automobile Co.
Se Moines, Iowa, Automobile & Supply Co.
Sioux City, Iowa, Wm. Wornock.
Porto Rico, 32 Marina, San Juan.
Tampa, Fla., James Bros.
Watertown, N. Y., Warner Automobile Co.
Springfield, Mass., Geisel Automobile Co.



Rushmore Flare Front Headlight in section, showing removable back cap

Rnshmores vs. the "Chinese Copies"

Some Usual Points of Difference

Rushmores

1. Heavy sheet brass; all parts held together by screws and rivets, not by solder

2. Lens Mirror large, of heavy heat-resisting lead glass, ground of deep curvature and short focal distance. Removable as shown.

as shown.
3. Front and back of cylinder stiffened by heavy endless rings, riveted on.

ened by heavy endless rings, riveted on.
4. Castings machine finished and accurately fitted. All details carefully attended to.

"Chinese Copies"

Sheet brass too thin to hold screw heads or rivets, therefore solder mainly relied on.

Lens Mirror small, of light brittle green glass, relatively flat and of long focal distance. Not removable except with soldering iron and torch. Light non-continu-

Light non-continuous rings soldered in place.

fitted, side sockets soldered, and details generally slighted where not seen.

Permanent Injunction Granted Against Copying The Rushmore Flare Front Design

A PERMANENT INJUNCTION was granted on Jan. 3, by the United States Circuit Court, Southern District of New York, against the Manhattan Lamp Works, forbidding them to make or sell lamps in imitation of the Rushmore Flare Front design, or to use the words "Flare Front" in describing their product. The terms of the Judge's decision are very broad, and we shall at once proceed against other lamp manufacturers who have for the past year been trading on our reputation by the sale of cheaply-constructed imitations of the Rushmore

Two years ago, when the American trade generally was copying a French reflector lamp, we adopted the now familiar Rushmore Flare Front as a distinctive dress. It was immediately linked in the public mind with the intense, long range beam of the Rushmore Lights, and by the fall of 1906 there was not a motorist who thought of lamps at all but recognized the optical correctness of the Rushmore, and its immense superiority over every other type offered. Other makers, seeing their trade slipping away, discarded their own models and began making copies of the Rushmore. But, lacking the means and skill to duplicate Rushmore quality-in particular the short-focus lead-glass Rushmore Lens Mirror,—they copied the shape only, using in general thinner stock, solder instead of screws and rivets, and small, cheaply-ground, green glass lens mirrors of long focus. These flimsy affairs, in many cases nearly worthless as light givers, they sought to foist on the public by cut prices, chicanery, and downright substitution. Numberless purchasers who specified Rushmores, or who did not know that every lamp and lens mirror we make bears our name, were deceived by the imitations, and laid the blame for their inefficiency anywhere but where it belonged. Thousands of others were persuaded that the imitations were "as good as the Rushmore," only to realize their mistake too late.

Of these unscrupulous practices the Manhattan Lamp Works afforded a small but flagrant example. We propose to defend to the finish our right to keep our designs exclusive, and the public's right to suppose that what appears to be a Rushmore Light is such in fact. Meanwhile we caution all purchasers to look for the name RUSHMORE etched in the lens mirror, and our firm name engraved plainly in the top of the ventilator (Rushmore Lights have no name plates).

Rushmores

the final choice of the experienced motorist

Rushmore Dynamo Works, Plainfield, N. J.

LONDON

PARIS

CHICAGO



There is Only One BEST

The Car of Steady Service

as applied to the



is more than a mere phrase, it is a title earned through correct design and careful construction and proven by years of hard, constant service wherever power-driven vehicles are known.

The practical qualities that established the Rambler reputation are,-

- 1st-APPLIED POWER. By this we mean actual tractive force as applied to the road wheels. Owing to the straight line drive of the four-cylinder models and the direct chain drive in the two-cylinder cars, Ramblers have greater propelling force per pound than any other car on the market.
- 2d—DEPENDABILITY. Ramblers are built to stand the test of hard, daily service over the worst of American roads. This condition is not reached by mere weight and masses of metal, but by simple, scientific construction in which each element is stronger than the strains upon it can ever require.
- 3d—PRACTICAL ROAD VALUE. With the vast facilities of an enormous plant like the Rambler factory, skillfully directed to the production of two models only, greater value per dollar can be offered than is possible in a plant of lesser output.

In short, the Rambler is a car of

Power, Service and Value

Ordinary business policy dictates a careful examination of its many high qualities before ordering your

Our 1908 catalog fully describing two touring cars and a high-powered roadster is at your service: write to-day.

Thomas B. Jeffery & Company Main Office and Factory, Kenosha, Wis.

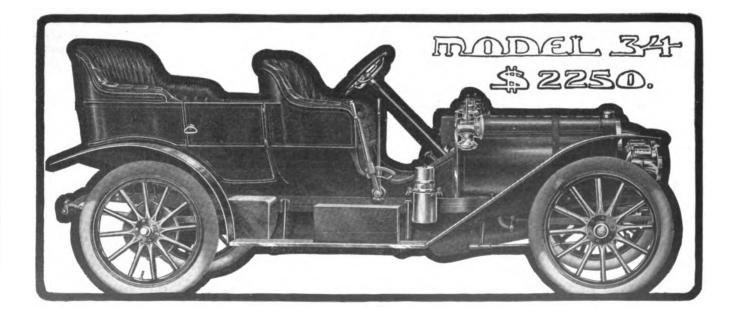
CHICAGO

BOSTON

Branches and Distributing Agencies

MILWAUKEE

SAN FRANCISCO



Volume XVII.

New York, U. S. A., Thursday, January 16, 1908.

No. 16

MILLER PREDICTS A BUSY YEAR

His Favorable Analysis of Reports from All Sections—Business Methods Likely to be More Conservative.

It is not often that W. B. Miller, the secretary and sales manager of the Diamond Rubber Co., permits himself to be quoted in print. When he does so, it is certain that he has something worth the saying, and when it has to do with business conditions and prospects, his statements cannot but carry weight, for few, if any, are in closer or more thorough touch with the several phases of the business.

"A busy year for accessory branches of the automobile industry," is his prediction, summed up in the fewest words. "The basis of this statement is a careful analysis of reports from all sections," he says. "These reports indicate that the amount of renewal business to be done will be larger than ever before. The number of automobiles in use the past year will not be reduced. If some owners do not see fit to use their machines, the cars will pass to those who will. The number of new cars to be provided for, while not equal to that of 1907, will still reach, in the aggregate, a very large figure, making necessary in the grand total a great extent of equipment of

"It is to be expected that business will be done along more conservative lines in all branches of the trade. The accepted forms of regular merchandising will prevail to a greater extent than formerly and high quality, particularly in tires, will be demanded because of the true economy of using such products. The far-seeing dealer and consumer are both on the quality platform, and both alike working for the greatest economy in up-keep cost. That they should do so is highly desirable. The 1908 season will undoubtedly see greater discrimination in buying exercised by all automobile owners, and the general effect

cannot but be healthful and beneficial to the industry as a whole."

To Make Taximeters in This Country.

In anticipation of the growth of the taxicab a new company to manufacture the taximeter instruments in the United States has been formed under the name of the International Taxameter Co. of America. It will operate under the American patents owned by the Internationale Taximeter Co., Ltd., of Berlin, which at the present time makes a large proportion of taximeters used abroad. The company is incorporated under New York laws with \$300,000 capital, of which \$50,000 is preferred stock. Jacob A. Cantor, former borough president of Manhattan and an ex-State senator, is one of the leading spirits in the enterprise and J. A. Costuma is the general manager. Pending formal organization, temporary offices are maintained at 25 Broad street, New York. It is planned to lease the taximeters on a 10 cents per day basis, rather than to sell them outright, and the promoters look forward to placing 10,000 instruments in New York and its vicinity, with all the rest of the country still to be heard from.

Duryea Wins in Receivership Fight.

The action of the referee in bankruptcy in refusing to permit H. M. Sternbergh to vote his claim for \$14,438.86 for the selection of a receiver for the Duryea Power Co., of Reading, Pa., of which he was president, was sustained by the United States Circuit Court on Friday last. The case was argued in October last. The effect of the decision is that there can be no further legal interference with the Berks County Trust Co., whose selection was opposed by Sternbergh and favored by Charles E. Duryea, the latter winning by a majority of one vote. It is expected that the receiver now will apply for an order to sell the property and that proceedings will be taken to compel Sternbergh to pay \$26,000 which is claimed to be due for an unpaid stock subscription and which has remained in dispute.

APPRAISAL OF THE E. V. ESTATE

Report to the Court Shows a Total Valuation of \$1,709,603.08—Selden and Other Patents not Included.

Excluding the Selden patent, on which, while acknowledging its earning capacity, they diplomatically declined to place a value, the appraisers of the property of the Electric Vehicle Co., Hartford, Conn., have reported to the court that the estate is worth \$1,709,603.08. The appraisers, John R. Hills and F. C. Billings, pared more than \$300,000 from the inventoried value of the merchandise and nearly \$60,000 from the value of the book accounts. Their report shows that the New Haven Carriage Co., body builders, is one of the most profitable of the Electric Vehicle Co.'s possessions. It was purchased in 1899 for \$193,578.47, and since that time has paid in dividends \$211.500

Of the Selden and other patents included in the assets, the appraisers say:

"This patent on a road engine is considered very valuable by the officers of this company, which holds the exclusive license with the right to grant sub-licenses for the use of this patent. We are informed by the receivers that the rights of the Electric Vehicle Co. in this patent have been productive of a large net income during the past five years, which income has been in excess of \$500,000. This patent has still five years to run, and if the income from this source during the next five years shall equal or approximate that of the last five years, it is apparent that this patent is a valuable asset of the company. We are unable to determine the present value of the income which may in the future be derived from this source, and for this reason we have not attempted to put a definite appraisal thereon. In addition to the above, there are more than 125 other issued patents, relating directly, or indirectly, to automobiles, granted between May, 1891, and

for letters patent are pending in the United States patent office, the value of which we
have no means of ascertaining and we re-
spectfully refer to list of same. We an-
spectfully refer to list of same. We appraise these as of value unknown. We also
wish to call attention to the fact that in
arriving at the grand total, we have not
taken into consideration the value of the
good will of the Electric Vehicle Co, as
a going concern."
Following is the inventory in full:
Land in town of Hartford \$48,000.00 Spur track running to property of
company 7,500.00
All buildings on property in Hart-
ford 249,653.00
Power, electric and heating plants
and accessories, consisting of boilers, pumps, heaters, filters,
boilers, pumps, heaters, hiters,
motors, transmission, wiring and fixtures, fire protection, in-
cluding watchman's system 79,897.00
Special equipment, consisting of
Special equipment, consisting of fuel oil system, compressed air
system, plumbing for manufac-
turing purposes and snop nx-
tures (such as benches, drawers, cupboards, tanks, etc.) 9,900.00
Machinery for manufacturing pur-
poses. (Note: Value of machin-
ery slightly increased on com-
pany's inventory valuation for
reason that said inventory
shows excessive depreciation, and we estimate original cost at not less than \$195,000) 165,000.00
at not less than \$195,000) 165,000.00
generally used in the manufacture of automobiles and machinery of all classes 40,000.00
chinery of all classes 40,000,00
ligs and fixtures for making parts
of automobiles, also dies and
tools for manufacturing drop
forgings for parts of automobiles
Patterns for making castings for
parts of electric and gasolene
automobiles, including metal
and wood patterns (company's book value, \$24,015.00) 16,000.00
book value, \$24,015.00) 16,000.00
Office and factory furniture, in- cluding time and cost keeping
system 4,400.00
Merchandise account, itemized as below
in two columns:
Inventory Corrected Values Values.
Finished parts stores.\$383,952.04 \$255,969.00 General stores 162,094.93 129,000.00
Work in progress

September, 1907, and numerous applications

turing purposes and shop fix- tures (such as benches, draw-
ers, cupboards, tanks, etc.) 9.900.00
Machinery for manufacturing pur- poses. (Note: Value of machin- ery slightly increased on com-
pany's inventory valuation for reason that said inventory
shows excessive depreciation.
and we estimate original cost at not less than \$195,000) 165,000.00
Standard small tools such as are generally used in the manufacture of automobiles and ma-
chinery of all classes
Jigs and fixtures for making parts of automobiles, also dies and
tools for manufacturing drop
forgings for parts of automobiles
parts of electric and gasolene
automobiles, including metal and wood patterns (company's
and wood patterns (company's book value, \$24,015.00) 16,000.00 Office and factory furniture, in-
cluding time and cost keeping system
Merchandise account, itemized as below in two columns:
Inventory Corrected Values Values.
Cilisieu parts stores.\$383,952.04 \$255,969.00
Finished parts stores.\$383,952.04 \$255,969.00 General stores 162,094.93 129,000.00 Work in progress
Work in progress (parts)
Work in progress (parts) 154,189.35 102,700.00 Vehicles in progress. 164,930.29 123,000.00 Consigned inventory
Work in progress (parts)
Work in progress progress 154,189.35 102,700.00 Vehicles in progress 164,930.29 123,000.00 Consigned inventory (merchandise) 3,467.13 467.00 Finished vehicles 125,635.16 110,000.00 Consigned vehicle account 17,927.11 16,200.00
Work in progress progress (parts) 154,189.35 102,700.00 Vehicles in progress 164,930.29 123,000.00 Consigned inventory (merchandise) 3,467.13 467.00 Finished vehicles 125,635.16 110,000.00 Consigned vehicle account 17,927.11 16,200.00 Second-hand vehicles 49,884.29 12,500.00 Stationary and liter- 49,884.29 12,500.00
Work in progress progress 154,189.35 102,700.00 Vehicles in progress. 164,930.29 123,000.00 Consigned inventory (merchandise) 3,467.13 467.00 Finished vehicles 125,635.16 110,000.00 Consigned vehicle account 17,927.11 16,200.00 Second-hand vehicles 49,884.29 12,500.00 Stationary and liter-
Work in progress progress (parts) 154,189.35 102,700.00 Vehicles in progress 164,930.29 123,000.00 Consigned inventory (merchandise) 3,467.13 467.00 Finished vehicles 125,635.16 110,000.00 Consigned vehicle account 17,927.11 16,200.00 Second-hand vehicles 49,884.29 12,500.00 Stationary and literature 13,279.45 5,000.00 Commerce St. stores 18,205.95 2,000.00
Work in progress (parts)
Work in progress (parts)
(parts)
Work in progress (parts)
Work in progress (parts)
Work in progress (parts)

same being very old and of doubtful value	22,383.35	1,500.00
unpaid royalties,	•	,
which are consider-		
ed uncollectable		9,000.00
Accounts receivable		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
amounting to	104,549.51	1
These accounts have	•	
been carefully in-		•
vestigated and \$15,-		•
000 of same are con-		
sidered uncollecta-		
ble. We also allow		
15% to cover time		•
and cost of collec-		76 117 00
tion		76,117.08
Total inventory value.\$	143.939.57	
	, - 57 . 67	****

Note: Item "book accounts" include all book accounts whether in hands of Connecticut receivers for collection or in hands of receivers in the States of New Jersey, New York, Massachusetts or Illinois, for collection by them respectively

Total corrected value.

\$86,617.08

Consisting of the entire capital stock of the New Haven Carriage Company, lo-cated at New Haven, capitalized as follows:

	ck at \$25 stock at \$25.	
	_	

3,000 511	ares	Common	STOCK	at \$25.	130,000.00
Total					\$200,000.00

The Electric Vehicle Co. purchased the entire stock of the New Haven Carriage Co. June 1, 1899, for \$193,578.47. Since the said purchase the New Haven Carriage Co. has paid in dividends \$211,500.00, and from statements shown is believed by us to be in good condition, having a surplus of \$75,000 over all liabilities and stock. Therefore we feel warranted in placing the prefore, we feel warranted in placing the pre-ferred stock at the rate of 125 per cent. on par value, or \$31.25 per share, and the common stock at the rate of 100 per cent. on par value, or \$25 per share, or a Total value of \$212.500.00
Grand total \$1,709.603.08
Total value of 12345665432

The receivers add a note to the inventory, saying there is not included in the above inventory an item of cash on hand in Hartford of \$13,983.81, and assets in other jurisdictions amounting to \$112,184.51.

The receivers also filed with the court the following report of business transacted by them from December 11 to December 31, 1907, inclusive:

Sales.

Charges on account	
Purchase.	\$15,760.19
On account	\$1,245.96 450.52
-	\$1,666.48
Cash Statement.	

Cash Statement	•
Receipts.	
Cash on hand Dec. 11	\$13,983.81
Cash collected on account	10,146.14
Cash sales	10,498.99
Cash miscellaneous	51.95
Illinois accounts	2,738.40
Massachusetts accounts	40.21
	\$37,459.50

Pay r

	1.				
olls	prior	to	Dec.	10	\$12,501.10

	Pay rolls receivers Traveling expenses Petty expenditures Illinois receivers	357.39 420.52
,	Cash receipts	\$28,840.50 \$37,459.57 26,840.50
	Cash on hand	

Taxicab Service Begun in Chicago.

Chicago, part of it at any rate, taxicabbed Thursday morning last, when the first of the Thomas taxicabs was placed in operation by C. A. Coey. Fifty of the vehicles will be in operation shortly. According to advices from the Windy City Owen H. Fay also will start a taxicab business. Fay has ordered ten Elmore cabs built and will place taximeters on eight electric cars, starting with eighteen available vehicles. With Orlando Webber also about to engage in the business as well as a subsidary company of the New York Taxicab Company, Chicago apparently will not want for the modern vehicles.

New York Dealers Promote a Carnival.

At a meeting of the New York Automobile Trade Association held at Hotel Cumberland, New York, yesterday, attended by over fifty prominent members of the trade in New York, it was definitely decided to hold an automobile carnival during the week of April 6. One of the settled features is a parade on Tuesday, April 7, which will consist of four divisions. The first division will comprise cars constructed in 1903 and prior thereto; second division, gasolene, steam and electric cars owned by dealers, cars not to be decorated; third division, commercial vehicles.

Brass Bands to Boom Business.

About the time the buds begin to sprout the Chicago Automobile Trade Association is going hunting for business with brass bands. During the week beginning March 28th, the Windy City dealers will hold a "spring show" which will consist of the dealers holding "open house" along the "row," which will be gaily decorated for the occasion. Brass bands, decorated parades, luncheons, and all the other features of a carnival will be brought into play to boost spring business in Chicago.

Stratton Joins Studebaker Staff.

E. V. Stratton, for the past year manager of the New York Automobile Trade Association, has resigned that staff to engage with the New York branch of the Studebaker Automobile Co., He will be associated with C. F. Redden in the manage.

Body Builders' Increase of Capital.

The C. R. Wilson Body Co., Detroit, has increased its capital stock from \$75,000 to \$250,000. The added money will be used in extending the business.

LEGAL VICTORY FOR RUSHMORE

His Right to Name and Descriptive Words
Sustained by an Injunction—Saxon
"Caught with the Goods."

The merry war in the automobile lamp business which was precipitated last spring over the questions of design in connection with the "flare front" and "Rushmore" types has found an echo in court, and the defendant lamp manufacturers who made and sold "Rushmore" lamps which were such in appearance only, seem to have been so thoroughly "caught with the goods" that they have been enjoined against their further manufacture and must give an accounting. In a decision in the United States Circuit Court for the Southern District of New York, Judge Ray takes Herman Saxon, of the Manhattan Lamp Works. of New York, severely to task for copying in detail the genuine Rushmore lamps and gives the complainant, Samuel W. Rushmore, of the Rushmore Dynamo Works, Plainfield, N. J., a sweeping injunction covering the use of the words "flare front" and "Rushmore."

Conspicuous among the exhibits during the trial of the case were receipts from the Manhattan Lamp Works covering the sale of "Rushmore" and "imitation Rushmore" lamps, together with lamps themselves made in imitation of the complaining manufacturer's product. Saxon appears to have readily fallen into the trap that was laid for him. In one case the receipt covered the sale of lamps to a purchaser during the Madison Square Garden automobile show, in January, 1907, while in another it represented an invoice of lamps to a western jobber.

Considerable stress was laid by the court on the fact that the design copying of the defendants was in some particulars so close and minute as to include defects and errors found in the original lamps, though in the main essentials of lens mirrors and brass stock the imitation lamps were quite different.

The judicial view as to the use of the words "flare front" in describing automobile lamps is of particular interest to the trade. After showing that while "flared front" and "flaring front" are ordinary and grammatical descriptions, the words "flare front" in combination, are unusual and ungrammatical, having been adopted by the complainant arbitrarily to coin a new and distinguishing mark for his lamps, Judge Ray says, "It is, of course, true that everyone is at liberty to use the ordinary descriptive words of the English language to describe goods of his own manufacture. But when one has designedly and abitrarily taken an unusual and an ungrammatical combination of two words, even if they do suggest an idea and a correct one of the construction and utility of the article of manufacture, and by long use of it has come to be so understood by the purchasers and users thereof, a competitor has no right to use it, for the purpose of deceit."

For this reason he grants a decree for the complainant, covering both the making and selling of the offending lamp shells and the use of the words "flare front."

The Week's Incorporations.

Newark, N. J.—Brush McLaren Motor Co., under New Jersey laws, with \$50,000 capital; to manufacture and deal in automobiles. Corporators—Annie V. McLaren and John Stern.

Watertown, N. Y.—Warner Automobile Co., under New York laws, with \$10,000 capital. Corporators—Charles D. Warner, Albert O. Warner and Edith Warner, all of Watertown.

Reading, Pa.—Reading Practical Automobile School, under partnership agreement, with \$200 capital; to teach automobile operation and repairing. Copartners—Malcolm T. Newstetter and Lester E. Goenzle.

Newark, N. J.—New Jersey Automobile Exhibition Co., under New Jersey laws, with \$5,000 capital; to promote automobile shows. Corporators—George Paddock, Angus Sinclair and James R. English.

East Moline, Ill.—Midland Motor Co., under Illinois laws, with \$100,000 capital; to manufacture motors, automobiles, etc. Corporators—C. H. Pope, A. E. Montgomery, E. H. Guyer, C. E. White and William Butterworth.

St. Louis, Mo.—Universal Auto Spring Co., under Missouri laws, with \$110,000 capital; to manufacture and deal in automobile springs and supplies. Corporators—Frank C. Koehler, Wm. Klasing, Henry Schwarting et al.

New York City, N. Y.—Automobile League, under New York laws, with \$5,000 capital. Corporators—Frank J. Griffen, 116 Nassau street; Nicholas Fancher, 213 East 135th street; William T. Conville, 2493 Broadway, New York City.

Rochester, N. Y.—Rochester Motor Vehicle Co., The, under New York laws, with \$10,000 capital; to sell motors, engines and accessories. Corporators—Fred C. Benson and Owen DeWitt, of Rochester; and Stephen H. Lusk, of Pittsford.

New York City, N. Y.—Columbia Lubricating Co., under New York laws, with \$1,000 capital. Corporators—Avery McDougal, 176 West Eighty-seventh street; Ward W. Pickard, 60 Wall street; Morton G. Bogue, 52 Williams street, New York City.

New York City, N. Y.—Adams Repair Co., under New York laws, with \$10,000 capital; to repair automobile parts, etc. Corporators—Clyde W. Adams, 457 West Fifty-seventh street; Claude L. Post, 605 West 141st street; Robert P. Kernan, 60 Wall street, New York City.

WRIDGEWAY WILL LESSEN GLARE

Secures Exclusive American Rights to Bleriot Light Shutter—Mayor's Message Opportune for Him.

Almost co-incident with the recommendation of the Mayor of New York that an ordinance be passed prohibiting the use of blinding headlights, Charles D. Wridgeway, himself a New York motorist of wide experience both on track and road, closed a contract for the exclusive American rights to the Bleriot light shutter or eclipsing device which seems to do away with the objectioable features which have caused complaint, while still permitting the use of brilliant headlights and giving to the driver all of their benefit and to the on-comer none of their disadvantages.

The Bleriot invention, which the Motor World illustrated at the time of its appearance abroad, is simplicity itself, resembling nothing so much as a miniature radiator of the horizontal stripe type. It is, in brief, a series of metal strips placed within the door of the lamp, so arranged that at a distance, there is no distinguishable difference between lamps so equipped and the regular type, but as one draws nearer the lamp the light becomes duled, and on passing reduces itself to about the same sized rays as those cast from an oil light turned down There is absolutely no reflection. The device, one of which Wridgeway has been demonstrating, must be seen in actual operation to be appreciated. In the meantime Mr. Wridgeway, thoroughly converted to its value, is preparing an aggressive campaign to place its merits before the motoring public at large.

Cincinnati Show Fading Away.

It is doubtful if the Cincinnati show, which was scheduled for the latter part of February, will be held. Following the last meeting of the Cincinnati Automobile Dealers' Association it was semi-officially announced that the show idea will be abandoned. The chief obstacle in the way is said to be the action of the insurance companies in demanding high rates, and while it is possible that this handicap may be removed, the general opinion is that it will not in time to make arrangements such as would be necessary to make the show a success.

G & J Changes Boston Representative.

The Boston agency of the G & J Tire Co., at 204 Columbus avenue, has been discontinued and the Enterprise Rubber Co., of which William E. Barker is president and treasurer, has been appointed New England representative. D. B. Price and R. J. Barker, who have been connected with the G & J agency, will continue with the Enterprise Rubber Co.



THE INCOMPARABLE WITHE CAR FOR SERVICE



White Wins Quaker City Endurance Run

In the endurance run held January 1-2 by the Quaker City Motor Club, the White Steamer was the only car which made a perfect score on the road and also was declared by the Technical Committee to be in perfect condition at the finish. The Contest Committee would not abide by the decision of the Technical Committee. They gave credit for perfect scores to two other cars and ordered a "run-off."

The supplementary contest, held January 4th, served only to emphasize the superiority of the White. The examination then made by the Technical Committee placed the White far in the lead and, accordingly, the MacDonald & Campbell trophy was awarded to the White.

With our entry of but one car, we decisively defeated 27 gasoline cars representing 23 different makes. Thus has another important victory been added to the long list of triumphs achieved by the White—the distinctively American car.

Write for Literature

THE WHITE COMPANY CLEVELAND, OHIO

Digitized by Google



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

La Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JANUARY 16, 1908

Lifting of the Clouds.

During the period of financial unrest, which now is nearly dissipated, nothing has been at once so pitiful and so amusing as the efforts of the braver souls to convince themselves and others that "nothing had happened,"—that everything was rosehued and that the so-called depression was but a bad dream.

It serves no purpose to wail, or shed tears, or to spread gloom, but neither does that form of self-deception and rainbow-chasing effect any real end. It is like whistling to keep up courage. When a manufacturer cannot obtain accommodations from his bank, when his factory is operating on half time or no time at all, when a salesman cannot sell and when a man is out of employment, it is folly to try to convince him that "everything is lovely and that "nothing has happened," or that the conditions to which he is subject are merely dreams or imaginings which may be

routed by applications of faith or by cheerful whistling.

But now it may be said that the clouds are dissipating and that the sun again is shining through the rifts. Things are picking up all around. Factories are resuming their industry and salesmen are again selling automobiles. Cheerfulness is spreading and it is the real thing and not the mock article accompanied by doubtful smiles or qualifying whispers. The industry is resuming a normal tone, if not its normal tone, for its normal tone rather had been abnormal. Its pace had been too swift. Caution had been too largely thrown to the wind. There were too many who recked not of the morrow.

The disquieting flurry was not without its benefits. It taught some men the meaning of caution and conservatism and showed them the folly of attempting to rear ladders to the skies. If the chastening and house cleaning is not wholly completed, the trade at least can now go about the work of readjustment with renewed spirit and, as always, the fittest will survive.

Quicksand as a Foundation.

Some day it will filter through some heads—if not those that now are directing the organization, then their heirs or assigns—that the American Automobile Association "got in wrong" when its foundations were laid so largely on club memberships and not individual memberships.

The capital made of it by their enemies and the damaging publicity given to the recent withdrawal of the Massachusetts Automobile Club should assist the filtration process even in the present administration, of which, however, there is sign. Club memberships, which means accession of members in large blocks, enable the officials to quickly lengthen the roll and during a boom period they are obtained with comparative ease, but when a club drops, a hole is created and the dropping creates a noise that attracts undesirable attention. A succession of holes and a succession of noises do an awful lot of damage, whereas the dropping of one individual member or several hundred of them never would be heard and would excite no notice, and the voids created easily might be filled.

It is unfortunate, but it is true, that sooner or later a majority of clubs weary of paying large sums from their treasuries, or one man with a grievance often is able to persuade them that they are weary of it, and then begins the trouble and the downward slide of the national organization with which they are afflicted. It is logic. It is history. The effect of their indifference to the teachings of experience and to the individual member, which the Motor World several times has remarked, may not be felt during the terms of the present A. A. A. officials or of their immediate successors—they will be able to retire with the proud boast of a "large membership"—but on those who come after them will fall the difficult task of practically rebuilding the organization.

What has happened in Massachusetts will happen elsewhere; if not to-day, then to-morrow. It is practically inevitable. As a foundation, club membership is akin to quicksand.

Unbiased Test of "Sixes."

All partisan feelings aside, the question as to the relative suitability of four and six cylinder motors for popular usage should be regarded in a tentative way pending a decision which ultimately must be based on actual service at the hands of a large number of unbiased users. In most of the discussion which is taking place on this subject the fact is overlooked that even granted superior characteristics for the sextuple motor in certain respects, other and even uneconomical considerations may serve to render the quadruple type more useful in the majority of cases. The fact that several makers of repute have abandoned the four cylinder motor in favor of the six does not necessarily prove that the six is in every way superior any more than the expenditure of immense amounts of money in the construction and installation of quadruple expansion steam engines in ocean liners and large power plants at one time, proved the advantage of using four stages of expansion instead of three. As in the present case, each system has certain advantages over the other. But the final question of their relative utility cannot be answered until both have been given a fair trial under circumstances affording an absolute basis of comparison.

All this being so, it is extremely gratifying to discover a maker who is willing to acknowledge himself open to conviction in either direction, while doing his best to perfect both types, and while at the same time striving also to produce two motors which shall be equivalent in all respects save in the one particular of the number of



Rim Equipment of Taxicabs.

Editor of The Motor World:

Allow us to call your attention to a statement made in a recent issue of your paper entitled, "Success of the Taxicab Service."

You state that the New York Transportation Co.'s vehicles are equipped with Midgley rims to enable them to remove tires quickly for repairs.

Not a single New York Transportation Co.'s vehicle is equipped with Midgley rims, but on the other hand, 25 of these vehicles are equipped with the Goodyear universal rim, which the New York Transportation Co. will tell you has been found to be eminently satisfactory in every test they have given it. We might add to this that these Goodyear universal rims are equipped with Goodyear detachable tires which have averaged also 4,000 miles up to date, with repairs approximately \$30 for the entire lot of 100 tires.

Inasmuch as you devoted considerable space to your very interesting article in connection with the taxicab service you will probably be willing to correct your statement as to the equipment of the New York Transportation Co. and further enlighten your readers regarding tires with the information we give you herein.

GOODYEAR TIRE & RUBBER CO.

[Upon being asked specifically concerning the rim equipment of his company's gasolene taxicabs, Secretary Palmer, of the New York Transportation Co., explained that in his earlier interview he had stated that the cabs were fitted with Midgley rims without investigating their manufacture but rather in the generic sense of detachable equipment. Investigation, however, discloses that the present rim equipment consists of 25 sets of Goodyear universal rims and 25 sets of Firestone universal rims.]

In the Retail World.

Stanley & White are building a garage in Church street, Whitman, Mass. Its dimensions are 40 by 70 feet.

The Westworth Motor Company has established a new agency at Euclid avenue and Mayfield road, Cleveland. The Ford and Mora cars will be carried.

Charles Hendy, Jr., who was formerly in the life insurance business in Denver, Colo., has set up in the automobile trade there at 1552-4 Broadway. He will handle the Ford.

P. C. Long is building a three story garage with a frontage of 63 feet at 207-209 West Ninety-eighth street, New York. The construction will be fireproof re-inforced concrete.

C. W. Risden, of Los Angeles, Cal., who has sold motorcycles to considerable advantage in California, has added automobiles. The Brush runabout is his acquisition.

The Nock Automobile Company opened its new and commodious garage in Providence, R. I., last week. It is located at

February 1-8, Providence, R. I.—Show in Providence State armory.

COMING EVENTS

February 10-15, Detroit, Mich.—Tri State Automobile and Sporting Goods Association's annual show in Light Guard armory.

February 17-22, Cleveland Ohio—Cleveland Automobile Dealers' Association show in Central armory.

February 21-29, Newark, N. J.—New Jersey Automobile and Motor Club's and New Jersey Automobile Trade Association's annual show.

March 2-7, Ormond, Fla.—Annual beach carnival, under ausp ces Automobile Club of America.

March 7-14, Boston, Mass.—Boston Automobile Dealers' Association annual show in Mechanics Building and Horticultural Hall.

March 9-14, Buffaio, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

486-488 Broad street, where the Stoddard-Dayton will be exploited.

The Maxwell Company has opened an agency in Worcester, Mass., at 84 Mechanic street. It will be in charge of Melvin E. Dixon, although the establishment will be under the supervision of Lucius S. Tyler of the Boston office.

The Ohio Motor Car Co., Cleveland, moved into its new quarters in the Otis building on upper Euclid avenue, last week. The building has been entirely remodeled to make an up-to-date garage and sales rooms for the company.

The Worcester Motor Buggy Co., which has been formed at Worcester, Mass., to sell several lines of cars, has elected the following officers: President, W. J. Woods; secretary, Edward L. Caton, and treasurer, John P. Coughlin.

William Ehlers has purchased the interests of Joseph Seaman, who with Percy Duerr has handled the Maxwell in Davenport, Ia. The style of the new firm will be Ehlers & Duerr and a new garage will shortly be built on Fourth street.

The handsome new garage recently erected by the L. S. Gillette Company at Hennepin and Harmon place, Minneapolis, has been purchased outright by the Barclay Automobile Company, which occupied it. The consideration mentioned in the deed was \$32,000.

Pittsburg has another automobile agency—the Pittsburg Automobile Co., which has located at Grant boulevard and Seventh avenue. The company, which will handle Thomas cars exclusively, this week is holding a show in the new salesrooms, in the nature of a house-warming.

It is noteworthy that the first official American road test of a car using benzol has taken place. This and all other attempts to develop newer and more economical grades of fuel than gasolene are praiseworthy and much to be encouraged. At the same time it is a pity that organized bodies, such as the engineers and some of the larger clubs, do not take a more lively interest in such tests and in addition to stimulating popular interest by organizing competitions and road trials, establish a well-organized system of laboratory investigation. Much of the alleged experimental work carried on in this country in connection with the automobile movement is of small consequence practically speaking because directed with too little regard for theoretical exactitude.

cylinders employed. It is not that the effi-

ciency of the newer motor is in question,

nor that its design offers problems of such

a nature that they cannot be solved readily.

It is not that the one, or two or four cylin-

der types of motor have outlived their

usefulness. The whole matter hinges about

the final acceptance or non-acceptance of

the sextuple motor by the user as being, all

things considered, best for his purposes.

The maker who places himself in a position

to test the "roadability" of each type on a

thoroughly comparative basis, loses nothing

by his conservatism in not advocating

either to the exclusion of the other, and

finally discovers himself able to cater to

popular demand which ever way it swings.

His friends who handed out the press notice meant well and the young man himself is not to blame, but they performed doubtful service when they heralded the recruit to the ranks as being "peculiarly qualified" for automobile work because of his having enjoyed a college engineering course and three months' service in the repair shop of a local garage. A college course and three months in a repair shop! It is calculated to make some men in the trade smile a very reminiscent smile.

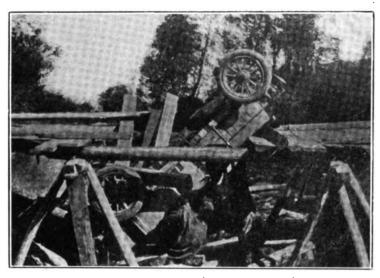
Possibly if the promoters of the proposed Westchester road race had "showed down" a little earlier, they might not now be put to it to secure sufficient entries to prevent to project from falling through. The lack of entries indicates also that the trade was not crying so loudly for such an event as was made appear.

FRUITLESSNESS OF FREAK RACES

Wherein the Pekin-Paris Run Failed—What It Forecasts for the Proposed New York Paris Contest.

Effervescent but evanescent Parisian enthusiasm for the proposed New York to Paris "automobile race" has subsided to a sober consideration of its practicability and the more serious study that is given it, the plights. As shown in the accompanying ilustrations, there were many times when progress was not dependent upon the power or virtues of the automobile itself but upon the available facilities in mules and men for moving heavy freight through certain districts. The trip made clear that where conditions were suitable the automobiles could run, and where the conditions were unsuitable, they could not. To propose a race where motor cars cannot go on their own power would open the way for a contest up

to Paris "race," the Pekin-Paris would be but a pleasant little excursion, and despite the gravity of Le Matin, the publication fathering the project, in describing the rigors of the journey, it is doubtful if it realizes what it asks the competitors to attempt. As showing, however, that it is not wholly insensible to the difficulties to be encountered in such an undertaking, Le Matin publishes great quantities of advice to the prospective contestants, relating to the best preparations for the trip. Re-



HOW THEY WENT THROUGH, NOT OVER, A BRIDGE



HOW THEY DIDN'T PROPEL THROUGH BOGS

more its probability dwindles, as a bonafide undertaking. That as a race for automobiles unassisted by other power it is an impossibility, even granting the use of boats for Bering Strait and for ferrying the rivers, is becoming apparent, both by the growing information concerning the topography of the northern portions of the itinerary and the facts that are being elicited concerning the famous Pekin-Paris race which has been held up by its promoters as an evidence of the feasibility of the later project.

The very honesty and frankness of the record of that brave adventure, as told in his recently published book by Luigi Barzini, who accompanied Prince Borghese, shows it to have been a sincere and creditable enterprise on the part of the contestants, but the experiences of the latter nevertheless establish the fact that automobiles cannot accomplish the impossible and that in going from Pekin to Paris the machines were at times just like so much freight that had to be moved or transported Only a distorted conception can accept such features as anything but contrary to the usual understanding of what constitutes an "automobile" race, and certainly of no value as indicating the capabilities of the motor

During some 120 miles that the car of Prince Borghese was being pulled by mules and horses, or pushed and carried by coolies and laborers, Barzini had plenty of time to take pictures of the machine's

Mt. Blanc or Mt. McKinley, where the winning car would be that preceded by the best mountain climbers to rig up the nec-



HOW THEY DIDN'T CLIMB HILLS

essary tackle and windlasses to draw the machines bodily to the top.

Compared with the so-called New York

garding construction and equipment the promoters of the race have this to offer:

"A short chassis is preferable, one of 30 or 40 horsepower. The air intake of the carburetter should be supplied with a warmer. This warmer will thaw the air at the moment of starting and thus save time. This can be accomplished by affixing a thick tube to the air intake, this tube passing outside of the automobile and being adjusted to a lamp, so that it can be heated red hot. The air intake will thus be heated by conductibility. A special tap should be arranged so that the tube conducting fuel to the carburetter can be completely emptied, so that the motor can be heated by means of a little oil ignited in a metal plate under the motor.

"Spare rims and tires should be placed in the middle of the chassis above the reservoirs. Coffers for food supply, clothing and spare parts should be of such shape as to fit in between the spare rims and tires. The driver's seat should have as cushions the three sleeping bags. There should also be a special hood, furred outside and in, long enough to descend to the waist of the drivcr, who is being relieved so that he can sleep while his comrade continues the course. The third seat in the middle of the chassis should be left unoccupied and placed at the disposition of correspondents of the organizers, who will pass from one machine to the other in the course of the voyage. Immediately over the chassis there should be a series of at least five fuel tanks, each ca-

pable of holding as much as the usual large pressure tanks in current use.

"In San Francisco, in stores which make a specialty of such merchandise, will be found everything necessary for travelers going to Alaska. This equipment, for the most part, will be better than that which you could secure in Europe. The list includes a revolver and Winchester rifle, felt boots, rubber hip boots, moccasins, fur mittens, sheepskin sleeping sack, picks and shovels, white bear oil for greasing the face and body. Native dogs should be taken on at Valdez. From Europe should be taken yellow goggles with double lenses mounted in wood and bordered with fur or silk, the whole united in a fur mask covering the face; nine pairs of woolen stockings, superposable, so that three pairs can be worn at a time; heavy flannel shirts, boxes of preserves, a compass, silk tent, and Nansen stove.

"Wheels should have removable rims. For traveling on ice pneumatics should be replaced by metallic types supplied with steel creepers. For traveling on snow a wicker platform of six square metres, bordered with wooden runners, should be fixed under the machine. This will support an automobile of 2,000 kilogrammes. The wheels, in case of soft snow being met with, could be supplied with wide wooden rims of water wheel formation. This equipment could be in use only in certain portions of the United States. In Alaska it would be useless, as the snow there is frozen hard. All pneumatics should be vulcanized in order to resist the great cold."

Speakers for the A. C. A. Banquet.

That there will be a large attendance at the annual banquet of the Automobile Club of America on January 25 was assured long before, the listing of reservations closed on the 15th inst. The banquet hall in the new club house has capacity for 361 covers, and it is probable that every place will be occupied. Incidentally the banquet will be a sort of christening of the new home of the club.

As a tribute to the claim of France to being the birth place of the modern motor car the French Ambassador, Jules Jusserand, will be the guest of honor. Among those who are to furnish the "flow of soul" on the occasion are Senator Chauncey M. Depew, Augustus Thomas, Job E. Hedges and Patrick Francis Murphy. The committee is composed of A. R. Shattuck, chairman; Dave H. Morris and O. A. Parker.

With good roads as its slogan the Youngstown (Ohio) Automobile Club was organized last week. The following officers will guide the new club's destiny: President, James A. Campbell; vice-president, John R. Squires; secrtary-treasurer, George L. Fordyce; trustees—J A. Campbel, John R. Squires, Dr. W. H. Buechner, C. A. Cochran, Dr. C. R. Clark, George E. Day and C. B. Klingensmith.

JERSEY CLUBS FRAMING NEW LAW

Twenty of Them in the Movement—Their Delegates Outline Important Amendments to the Frelinghuysen Act.

Representatives of twenty automobile clubs, comprising 2,700 members, met at Trenton, N. J., last Thursday, 9th inst., and thrashed out the question of probable automobile legislation in New Jersey during the present legislature. It was a special session of members of the Associated Automobile Clubs of New Jersey, and the discussion which followed the plan of action suggested at an informal meeting of representatives of the various clubs held in Newark, resulted in the decision to draft and have introduced amendments to the present Frelinghuysen law, which has been in operation for a year.

Radical changes in the Freylinghuysen law are asked. One of them is that automobilists registered in other States be allowed to tour in New Jersey for a period not exceeding ten days, and that all licenses shall expire on the 31st day of December; further, that license tags be furnished in uniform style by the State.

One of the most important things asked for is a law requiring all horse-drawn vehicles to display lights at night, which, if passed, doubtless will tend to lessen accidents resulting from non-observance of this. It is proposed also to make it a misdemean or for an intoxicated person to drive an automobile; to make it a misdemeanor to throw glass, tacks or other tire destroying substances in the road; to require all license fees, and so forth, to be devoted to road repairing; to require all justices to report fines to State authorities, and to abolish personal registrations.

Summarized the amendments desired to the present law, and which will be presented to the legislature in session are as follows:

First—All horse-drawn vehicles to carry lights at night.

Second—Automobilists of foreign States to be given ten days' right to tour State without registering there.

Third—All licenses to run out December 31 of the year and tags to be furnished by the State.

Fourth—A higher fee for licenses to go to the highway commissioner for road repairs.

Fifth—Making it a misdemeanor for a drunken man to drive a machine, and for any one to throw glass or other brittle substance on the road.

Sixth—All fines must be reported to automobile inspector the day fine is imposed and all moneys from fines turned in within thirty days.

Seventh-Abolition of the personal reg-

istration idea, thus saving State about \$30,000 for maintaining officers over State.

Buffalo's Shakedown Declared Illegal.

Buffalo's automobile tax ordinance received a knockout blow on Wednesday last, 8th inst., when the Appellate Division announced its decision in the locally famous Dai H. Lewis automobile tax test case. Judge Hodson's decision that the Buffalo automobile tax was contrary to the State law is upheld by the Appellate Division. It may be remembered that when the Buffalo automobile tax ordinance went into effect it was strongly opposed by the Automobile Club of Buffalo, and in order to make a test case Dai H. Lewis, secretary, offered himself as a martyr, and by refusing to pay his tax got himself arrested. He was prosecuted by the city in the Municipal court, and ex-Judge Kenefick, his attorney, made the plea that the local ordinance conflicted with the State act in that it resulted in a double tax. Hodson upheld this contention and the city appealed with the result that the Appellate Division has upheld the decision, resulting in a victory for the automobile club.

Another Tangle Under Bay State Law.

The latest disputed interpretation of the Massachusets State law relating to automobiles is likely to develop some fine legal hair splitting when the resultant appeal case is argued. Charles E. Whitten, of Lynn, was fined \$15 by Judge Lummus in the local police court for operating an automobile without proper registration numbers on the side lamps. Whitten, who conducted his own case, contended that the car was registered in Pennsylvania, where the law does not require the rear or side light numbers; furthermore, he contended, he had the right under the Massachusetts law to operate a non-resident car seven days after bringing it into the State before making registration in Massachusetts. Judge Lummus ruled that the seven days of gra e apply only to a non-resident car driven by a non-resident owner, and accordingly adjudged Whitten guilty and imposed a fine of \$15, as stated above. An appeal was

American Consuls not Immune Here.

Magistrate Steinert, a New York justice, decided last Friday, 10th inst., that only consuls in the employ of foreign governments are immune from the speed laws, when he held Caldwell S. Johnson, of New Haven, who is connected with the United States Consular Service, in \$100 bail in the Morrisiana police court for trial in Special Sessions on the charge of speeding in his automobile. Johnson had protested at his arrest in Pelham Parkway, exhibiting official papers and asserting that he was on his way to Washington to keep an appointment with President Roosevelt. His excuse did not go with the magistrate, however.



"SIX" AND "FOUR" IN LONG TEST

Apperson Operating Both Types in Competitive Tryout Under Even Conditions—Relative Advantages.

A frank and decidedly novel turn is given to the much-discussed question of the relative suitability of four and six cylinder motors for popular use, by the open avowal of the Apperson Brothers Automobile Co., that with the best possible means of study and comparison at hand, their engineers have as yet been able to arrive at any definite conclusion as to which is the better of the two. For some little time two types of motor have been built, one a four and the other a six, which have about the same aggregate piston area and are otherwise similar, and may be used in the same chassis. A close observation of the performances of these two types is now being made with the idea of finally determining which is the better for general work.

It is frequently the case that six cylinder motors are made by merely extending the construction of an established quadruple design by adding two more cylinders to it. Comparisons drawn between the old and the new in such a case are manifestly unfair, even when nominal allowances are made for the difference in power. In building two motors of essentially the same power and weight, however, and fitting them into the same chassis, the Apperson brothers have placed themselves in a position to obtain the most truthful and extensive data which it is possible to gather, since the results so derived will be from practical use quite as much as from laboratory study and theoretical calculations alone.

"We believe that 'the proof of the pudding is in the eating.' We believe that both the 'six' and the 'four' each have advantages not possessed by the other, and it is our purpose and intent to find out, if possible, which of the two possesses the greater advantages, including power, speed, life of . motor, cost of maintenance, and repairs," remarks Sales Manager Strout, of the Apperson company, in this connection. "Some factories have turned out four cylinder motors that have not been practically successful and it might be 'good business' for them to jump into the six cylinder field, for a while at least. But it is not fair to compare the showing of any 'six' against the showing of a 'four' that has not been entirely successful and satisfactory.

"For some years we have been building a four cylinder automobile motor, with cylinders of 5½-inch bore and 5-inch stroke that has been entirely successful and satisfactory to all concerned. The total piston area of this four cylinder motor is 95.0334 cubic inches. Many months since we designed and built a six cylinder motor with 4½-inch bore, and 5-inch stroke, total pis-

ton area, 95.4261 cubic inches. It will be noted that the total piston area of this six-cylinder motor is only .3927 of a cubic inch greater than the total piston area of our four cylinder motor. The six cylinder engine weighs approximately 75 pounds more than the four cylinder engine, and occupies only 2½ inches more space under the hood. Both engines go into the identically same chassis, and barring the small additional weight of the 'six' engine itself they must propel the same number of pounds of chassis and body.

"In our case, we now have a four cylinder car, and a six cylinder car, of the same weights, with the same carrying capacity, operated by the same drivers under the same conditions. We have been driving our 'six' in competition with our 'four' only four or five months, and so we cannot yet arrive at accurate conclusions. We believe, as stated above, that each type has advantages over the other type, but right now, although we are building and delivering both 'sixes' and 'fours,' we are under the impression that the disadvantages of the 'six,' as contrasted with the 'four," outweigh its advantages. But we cannot yet make a definite decision and statement, based on our experiments and experience, that we would be willing to 'stand on' as final. At the end of the present season we will be in a position to know positively the relative cost of maintenance, of repairs, and of efficiency of the two types of engines, when they have the same piston area, and when they are operated under the same weights and conditions."

New Type of Sheet Metal.

"Alumaloyd" is one of those terms which tells a great deal in a very few letters. It signifies a special analysis metal sheet coated with aluminum-alloyed metal which by the treatment afforded it is absorbed, not spread over the surface, and thus serves the purpose of a thorough protection to the base metal as well as a surfacer. The Stark Rolling Mill Co., Canton, O., which has been producing Alumaloyd for some little time, is now making a specialty of supplying it to the automobile trade. For this purpose it is particularly suitable as used in the construction of bodies, dashes, guards, bonnets, batteryboxes, drip pans, mufflers and the other purposes to which sheet metal may be devoted, particularly where it is desirable to retain a good degree of finish in spite of adverse conditions. Because of its readyto-use quality it is an economical stock to carry, no finishing being required before painting, while it also may be used to advantage for die-work. According to the makers, it can be stamped, pressed, drawn, double-seamed or soldered-all without affecting the quality or value of the surface. Almost as a matter of course, it is produced in a wide variety of sizes and gauges adapted to the many uses for which it may be required.

HARTFORD PROUD OF HER SHOW

Annual Exhibition Opened Brilliantly and is a Beautiful One—List of the Exhibitors and Cars Staged.

Hartford had reason to feel real proud on Tuesday night, 14th inst., for the annual show of the Hartford Automobile Dealers' Association opened in Foot Guard Armory in a veritable blaze of glory "The Big Show," as the promoters termed it, has been the topic of conversation in Hartford for weeks, so it is little wonder that a large crowd of first-nighters visited the armory when the doors were opened at 8 o'clock Tuesday evening.

"The New York show in miniature"that's what the Hartford dealers like to call their annual exhibition, and in justification of this assertion they point with pride to the fact that the uniformed attendants scintillate in the same resplendent regalia that enfolded the attendants at the Madison Square Garden show, from the red military caps and coats, and white riding breeches to the black leather puttees. And if further proof of the semblance of Hartford's show to the last one in Manhattan is needed, they will tell you of "Society Night," Thursday, when the price of admission will be doubled and the tickets "limited" to 1,000 of the elite, although, as one of the promoters said to a Motor World man some time ago: "If fifty thousand people come on Society Night they can get in, for we wouldn't want to rob them of the chance of their lives."

In a decorative sense the promoters have "spread themselves," and the interior of the armory really presents a beautiful picture The general color scheme is green and white, and a great canopy in this conceals the ceiling, while the side walls are prettily covered by delicately tinted fabrics. The feature is the arbor in which the band is hidden. It is in the form of a bower, located on the uprights 14 feet above the heads of the spectators. Radiating from this flowered bower are long streamers of wires covered with smilax and studded with thousands of incandescent lights. The wires droop gracefully to the side walls and give a Christmassy effect to the whole.

Every inch of space is occupied, including the basement and balconies. The cars are shown for the most part by local representatives, the complete list of exhibitors being as follows:

Main Hall.

Electric Vehicle Co., Columbia gasolene and electric cars; The Miner Garage, Pierce, Buick and Knox; R. D. and C. O Britton, Maxwell; Capitol Auto Hack & Livery Co., Mitchell; Palace Automobile Co., Autocar, Thomas and Oldsmobile; L. D. Fisk, Corbin; Connecticut Steel & Wire Co., Reo;

Elmer Auto Co., Ford and Rambler; Brown, Thompson & So., Packard, Stevens-Duryea and Cadillac; Robert Ashwell, Franklin; T. Dudley Riggs, Isotta Fraschini and Simplex.

Balcony.

Jones Speedometer Co., Jones Speedometers, etc.; Barton, tires; Post & Lester, sundries; The Aetna Life, automobile insurance; Travelers' Insurance Co., insurance; Visor Knitting Co., clothing; G. W. Fuller Co., trunk racks, trunks, etc.; New England Automobile School, tuition; Lombardi Speedometer Co., speedometers; A. L. Foster & Co., clothing; W. H. Wiley & Son Co., leggins, tire covers, etc.; Vacuum Oil Co., lubricants.

Basement.

A. L E. Rhodes, automobile washers; Harriman Motor Works, motors; Auto Body & Top Mfg. Co., bodies and tops; Atlas Motor Co., Atlas trucks; Lighting Specialty Co., specialties; G. A. Snow, motorcycles.

Chicago Schedules Three Events.

A 1,200 miles reliability run, covering four days, will be the star feature of the 1908 card of the Chicago Motor Club. This decision was reached at a meeting held last Friday, 10th inst. The dates selected are June 24, 25, 26 and 27, and the run will require a car to do 300 miles each day, which should make it the most strenuous endurance run ever promoted in America. The desire for earlier dates for its contests was manifested at the meeting. The Algonquin hill climb was set for May 15th, three months earlier than usual, and the annual economy run was booked for August 14th instead of in September. The contest committee also discussed holding a reliability test for high-wheeled motor buggies, but no definite decision was arrived at.

The Blanket Insurance of Automobiles.

Among new legislation affecting insurance recommended to the Massachusetts legislature by its joint special committee on insurance is a provision to enable persons having insurable interests in antomobiles to obtain insurance under one policy against the risk of property damage from all the hazards encountered in their use, this policy to be issued under the inland navigation and transportation form of policy. This recommendation aims to have incorporated in the laws authority for a practice already permitted by the Attorney General of the Commonwealth, as was stated in a recess hearing before the special committee late last summer, reported in the Motor World at that time.

Grand Rapids Chauffeurs Organize.

Employed drivers of private automobiles in Grand Rapids, Mich, have formed the Grand Rapids Chauffeurs' Association with these officers: President, Jacob S. Baker; secretary, P. A. Donaldson; treasurer, W. M. Andrews.

THE MOTOR WORLD

MORRELL AND MOORE EXPLAIN

Chief Sponsors of Westchester Road Race Disclose "What's What"—Must Have 25 Entries or no Race.

If there are not 25 entries in hand by February 1st, there will be no race for stock cars on the roads of Westchester county on April 24th.

This statement comes directly from Robert Lee Morrell, Esq.—he is a lawyer—who is chairman of the Automobile Manufacturers' Committee, which has the project in hand.

The entry list was to have closed on Wednesday last but as but 13 were then in hand, the date has been extended in order to give the hesitants more time in which to decide whether such a race is worth \$1,000 to each of them. Of the 13 entrants in hand six are foreign cars, and of the others three are entered by the Cleveland concern which has been most anxious for the contest.

Mr. Morrell's statement followed a period of excited wrath, for the Motor World's suggestion that it were time for a showdown considerably aroused the gentleman. It induced the chairman to call a meeting of the committee, at which he read the Motor World's editorial with due emphasis, and while Morrell did not say so in as many words, he intimated quite generously that he would be made very happy if none of those present would advertise in this publication. But the editorial effected its purpose and a complete showdown resulted. While Morrell explained his position to one Motor World man, Thomas F. Moore, the secretary of the committee, produced letters and records that prove that Morrell and Moore do not constitute "the whole thing," as everything seemed to indicate, practically no other names having been permitted to see the light. It develops that the Automobile Manufacturers' Committee is made up of the following tradesmen, all of whom either verbally or by letter authorized the use of their names: Benj. Briscoe, C. A. Singer, Charles Schmidt, E. R. Hollander, Henry Ford, H. A. Lozier, Fred P. Brand, Andre Massenat, Hayden Eames, F. B. Stearns, Walter Allen, Paul Lacroix, A. H. Whiting, James Joyce, Percy Owen, W. H. Hurlburt, G. C. Johns, A. W. Church, A. L. Riker, E. T. Birdsall, H. C. Maxwell, Alden McMurtrie, G. S. Weidley.

In addition, there is an "advisory board" made up of newspaper men.

As for the fixed responsibility which the Motor World insisted should be made clear and which was the vital point in issue, one of the gentlemen concerned stated that the mere fact that the committee was not a closely knit or incorporated body made every one connected with it individually responsible, which he held was the best

sort of responsibility. Mr. Morrell, however, placed the matter in a different light. He guessed that as he is worth about a million dollars his responsibility could not be questioned, but as a better safeguard he said it is the intention to take out an indemnifying bond to the amount of \$100,000 which it is believed will be amply sufficient for all purposes and which will protect every one connected with the race except the entrants. In signing the entry blank the latter absolve the promoters and agree to bear their own burdens.

All of those concerned prefer that the so-called Metropolitan Automobile Association, which first undertook the road race for stock cars, be passed over with the fewest possible words. Moore, who "organized" it merely by printing a letterhead, now frankly admits all that the Motor World said regarding it was true—that as an association it was without shadow or substance, and was a mere "frame-up" for the purpose of promoting a hill climbing contest for the exploitation of a certain car. Mr. Moore laughs in his good natured way at mention of the "reorganization" of the "association." which was duly recorded by several members of the "advisory committee." In the "reorganization" it was stated that Mr. Morrell had become "chairman of the executive committee" and Job E. Hedges, "chairman of the legislative committee." Its disappearance almost immediately thereafter and the sudden creation of the Automobile Manufacturers Committee served to throw a suspicious mystery around the whole road race project. Moore states that he has been voted a salary of \$50 per week, none of which has he drawn, and that all accounts are to be audited by a sub-committee. If any surplus remains the actual starters in the race will have their entry fees rebated up to \$500 each.

In talking of his Metropolitan Automobile Association, Moore tells a good story of his abortive effort to secure a course on Long Island for the road race. It appears that another New Yorker became possessed of the same ambition and had arranged to meet the supervisors of Nassau county in order to obtain the necessary permission. Moore heard of it after the other fellow had departed for Long Island, and procuring an automobile he went posthaste to Mineola. Although the rival promoter had a long start, his car went wrong en route and Moore reached the supervisors and told his story first.

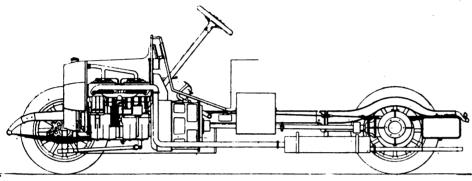
He also relates a laughable incident that attended his efforts to secure the course in Westchester county. In one place the farmers were obstinate because they feared the race would interfere with the delivery of their milk supply on the morning of the contest. Moore solved the problem by agreeing to pay fifty cents for each can of milk that might remain undelivered. It goes almost without saying that the farmers' obstinacy immediately melted.

CLUTCH AND BRAKE POWER EQUAL

Transmission Features of a New French
Gasolene - Electric Car—Wonderful
Simplicity of the Control.

Though comparatively slow in development, and even yet but little known in a practical way, there are nevertheless many reasons to believe that the combination gasolene-electric vehicle, or in other words, the gasolene car with an electric transmission will eventually become the most familiar and acceptable in popular useage. Theoretically it possesses many advantages impossible of attainment with the purely

The general layout of the vehicle is perfectly ordinary and modern. As will be seen from the accompanying illustration, the arrangement of the motor and transmission in the pressed steel chassis, as well as the suspension and axle mounting follow closely the lines of the ordinary touring car of moderate power and weight. The motor, which is of the four cylinder vertical pattern, has cylinders of 315-16 by 43/4 inches bore and stroke, and is rated at 20 horsepower at the normal speed of 1,400 revolutions per minute, though its maximum output is probably nearer 25 horsepower. It has interchangeable, mechanically actuated valves, drop forged steel connecting rods, light pistons and crank shaft mounted on three large ball bearings. Ignition is by



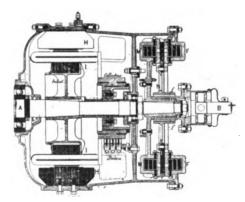
CHASSIS OF THE G. E. M. GASOLENE ELECTRIC CAR

mechanical transmission and even though tremendously expensive in cost of development, it is reasonable to suppose that once brought to a moderate degree of perfection it may be produced at a cost which is inconsequential, all things considered. Europe is doing much more in this direction at the present time than is America. One of the neatest and most pleasing designs yet produced, judging solely by its specifications, is the new G. E. M. car, which has just been introduced by the Société General d'Automobiles Electro-Magnetic

In principle the transmission of this vehicle comprehends the use of a direct-connected generator, magnetic clutch and clutch brake all enclosed within a single casing, and operated in conjunction with a 24-cell accumulator which is in parallel connection with the main line so that it serves the purpose of an equalizer and may be used for starting the engine, assisting it when operating under heavy loads, and is also subject to charge in the intervals when the drag on the clutch is relieved. The control of the car is marvelously simple, consisting of two hand levers mounted above the steering wheel, and two pedals. Of the former, one is used for starting and reversing, the speed changes being brought about by the movement of the other. Of the two pedals, one serves to apply the clutch or the magnetic brake as the case may be, while the other applies a pair of internal brakes on the rear wheels in the ordinary way.

high tension magneto, the ground switch being under the control of the master controller on the steering column.

It is governed automatically, this feature being the unique element of the carburetter which otherwise is of normal construction. The throttle, instead of being actuated in the ordinary fashion, is governed by a soft



ELECTRIC PLANT OF THE G. E. M.

iron core which is retained by a spring and plunges into a double-wound solenoid under the influence of its magnetic attraction. One of the two windings of the solenoid, which is of fine wire, is connected in shunt with the main current line. The other, which is of heavy wire is in series with the ground of the battery current. The plunger is thus affected by a differential action in the two windings and is extremely sensitive to current conditions in the system. The action of the solenoid and so of the motor, is to

equalize the action of the battery and dynamo currents as far as possible.

The chief organ of the electrical equipment consists of the dynamo which is of the 8-pole, shunt-wound type, as shown in the accompanying section. From this it will be seen that the field, H-H, consists of a magnetic iron spider centered in an aluminum frame which is bolted directly to the crank case of the engine. The armature, I, is keyed directly to the crank shaft, A, and is built up on laminations in the ordinary way. Three pairs of brushes are used, the brush holder being mounted in such a way as to be readily accessible for the replacement of the brushes. The maximum output of the machine is something like 200 amperes at 48 volts, or nearly 10 K. W., its normal output, however, averaging nearer 7, or between 9 and 10 electrical horsepower.

The arrangement of the clutch and brake are exactly similar, both acting on the same clutch disc and in the same fashion. Hence the braking power is exactly equal to the clutching power and may be controlled in the same way. The rotating field of the clutch, M, comprises an annular ring carrying a number of coils which receive current through a pair of collector brushes. The clutch disc, P, is suitably mounted in the casing to revolve independently of the crank shaft, and is connected with the differential through the ordinary form of cardan shaft, B. The field coils of the brake are similarly mounted, but are fixed to the frame of the transmission, as shown at F. Thus the magnetic drag exerted on the clutch disc whenever current is sent through the adjacent coils may be directed to causing the disc to turn with the revolving field of the clutch, or to retarding its motion according to whether the current is sent through the moving or stationary coils.

The control system has been outlined already. To start the machine it is necessary only to place the starting switch in the first position, when the battery current will be directed through the dynamo thereby setting it and the crank shaft in motion. A further movement of the starting lever serves to accelerate the group, at the same time cutting in the magneto and igniting the gas in the cylinders, the throttle being held open as a result of the current distribution. The controlling pedal being released from its midway position, the current is then directed into the clutch thus starting the machine, when the speed may be controlled by varying the strength of current in the dynamo fields. Similarly by depressing the pedal to its full extent, the current is switched over into the brake, when the retarding power becomes as strong as that of the clutch. For reversing, the starting switch is thrown over into its other extreme position when the battery alone is used for the time being. The clutch and brake functions act in exactly the same way under these conditions as for forward motion.

FLY WHEEL'S GYROSCOPIC ACTION

Possible Effects on Ultimate Behavior of Cars Described by an Observer—Some Other Possible Explanations.

A subject from which the non-technical reader has been happily relieved for some little time is that of the effect of the possible or probable gyroscopic action of the fly wheels of the motor on the life and action of the car. This matter at one time troubled motor engineers not a little, but was finally laid aside with the conclusion that whatever might be the gyroscopic effect it was not of sufficient importance to necessitate allowances being made for it in the design of the vehicle A thorough revival of the discussion is now threatened, however, by a communication recently published in an exchange, in which the writer claims to have observed a marked difference in the behavior of cars having right and left turning engines.

"I have noticed that the springs of a car driven by a right-hand revolving engine either touch the frame on the right-hand side or allow the tires to touch the wings on the right side, this usually taking place after the car has been driven some time and when well loaded, and driven over rough roads. The reverse is the case with a car which is driven by a left-hand revolving engine. The springs and tires then, under similar circumstances, commence to touch on the left side," is his startling observation.

"I have never required to strengthen or assist the springs of a left-hand revolving engined car, as, owing to my experience, such cars are or were all of low power, and the touching was slight I have often had to strengthen or assist the springs of various right-hand revolving engined cars. I have also had an occasional fracture of a leaf or two, taking place on right-hand revolving engined cars, all on right or off side, left-hand revolving cars excepted, all being low-powered, springs giving no trouble. I have also been unlucky enough to bend and fracture a few axles, all taking place on the right side of right-hand revolving engined cars, left-hand revolving cars again excepted, being low-powered.

"I have noticed that the off side spring bolts and shackles on right-hand revolving cars show far more wear than their opposite neighbors. The reverse is again the case with left-hand revolving cars.

"I have often driven abroad, where the right-hand side of the road holds sway I still notice that right-hand revolving cars are weak on off side. The springs of a car driven by an engine whose fly wheel runs parallel to the road wheels never behave in any way out of the ordinary."

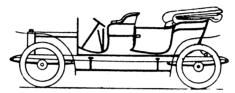
Some of the possible explanations suggested in accounting for these phenomena are: habitual running on one side of the road cambre, the constant weight of the

THE MOTOR WORLD

driver on one side, regardless of the state of the load in other respects; the unequal thrusts, due to the piston impulses, and the pull of the steering gear. "All this might be applicable to right-hand revolving engined cars, but what about the left-hand cars?" he concludes. "I am inclined to think the root of the matter lies in the relation to the gyroscopic action of the fly wheel of the engine being conveyed to the springs and axles of the car."

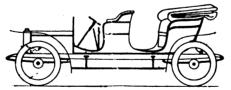
Victoria Body of Convertible Type.

During the last year or two the trend in the direction of the surrey and victoria types of body has been extremely marked, but never more so than at the present time when, both in the more luxurious of the open town cars, and in the lighter forms of open runabout of the two seated va



riety, the spirit of these designs is constantly reappearing. While of great utility in some respects, and lending itself well to ornamental design, the open-sided body possesses considerable disadvantage when it comes to long distance running over country roads—due to the effects of dust, mud and wind. For the light touring runabout, this effect may be overcome in part by the use of rather high, straight sides. But for the victoria town carriage this is manifestly impossible, and consequently, that vehicle in its most attractive form is not wholly adaptable for touring or country use.

In keeping with the development of the convertible idea which also has seen no



small amount of development within a short time, a London garage proprietor has designed the body here outlined, which is intended to be equally suitable for city and country running, but which in its former capacity, carries all the elegance of the true victoria. To this end a set of removable doors are used which may be readily attached when required, thus giving to the car the appearance of the regular touring vehicle, and affording the occupants all the protection which the high sides of that type provide. When required for city use alone, on the other hand, the doors may be removed, leaving the open victoria, as seen in the second illustration, which in ease of access and general air of comfort and luxury probably is unsurpassed by any other type imaginable.

ABSORBENT OF SOUND IN THE HOOD

Suggestions for Supplementing the Effect of the Muffler—MeMthods for Making
Hood Linings Fireproof.

While the advantages of properly silencing the noises of the motor are universally appreciated, it is generally believed that when a proper muffler is in use nothing further can be done to quiet a well designed machine. It is unquestionable, however, that the remarkably quiet performance of many of the more expensive automobiles arises not so much from any special provisions in the motor mechanism to silence the rattle of metallic parts as to the close construction of the hood. In this connection, it is noteworthy that in many other cases the hood acts as a sort of sounding board in accentuating the noise of the motor to an unpleasant degree.

Muffling the motor in this way, while done in effect on several machines which have tightly closing hoods, might be carried to a still further and more effectual degree by lining the hood with felt or some other sound absorbing material which could be suitably fire-proofed if required, and secured by means of a special heat-proof cement. It is probable that an asbestos lining would prove somewhat beneficial in this way, but there can be no question that a layer of thick felt would produce more satisfactory results.

In this connection, the Scientific American is responsible for the following method of compounding a cement for this purpose:

"Take 16 parts gutta percha, 4 parts cauotchouc, 2 parts pitch, 1 part shellac, 2 parts linseed oil. Heat the first until liquid and add the others in order, stirring thoroughly. Good glue, to which tannin has been added until the glue becomes ropy, is also useful for this purpose and cheaper, but will not stand so high a degree of heat; it is fairly secure up to 150 degrees F. Adding quick lime to ordinary glue will render the glue fireproof, but it will not sufficiently permeate the felt to fireproof the latter. The felt had better be soaked first in a solution of the following proportions: Boracic acid, 6 parts; sal ammoniac, 15 parts; borax (pure), 3 parts; water, 100 parts."

When for any reason a spark plug manifests a tendency to stick when it is desired to remove it, a good plan is to smear the threads with a paste made by rubbing into a small quantity of Albany grease as much flake graphite as it will hold. When the motor heats up the grease, of course, runs away, leaving behind it in the interstices of the thread, a thin coating of the graphite, which acts as a lubricant when it is desired to remove the plug, and secures its easy removal.

EVILS OF SLIPPING THE CLUTCH

How They Affect the Multiple Disc Type— What is Gained by Increase of Clutch Surface.

Although multiple disc clutches are commonly advertised by the makers who use them as being adapted to withstand suc cessfully an almost unlimited amount of slip the fact remains that clutch slip is not beneficial to any device of the sort at present in use, since any relative motion between the driving and driven parts is at the expense of a certain amount of friction of motion. Friction between moving parts always implies the generation of heat and abrasion to a greater or less degree, and it is a dubious fact that the clutch which is designed to slip seldom proves able to hold with any degree of certainty when a heavy load is applied.

In a general way the evils of slipping the clutch apply equally well to the disc and cone types. Much slipping grinds the surfaces together in such a way as to reduce the co-efficient of friction between them so preventing them from holding when required to do so. By increasing the amount of working surface in the clutch, as is done in the disc system, it is possible to increase the total amount of slip possible before destructive abrasion commences, and to do so to a remarkable degree. But the evil results of slipping are bound to remain after that limit has been passed, and to be just as important in their effects.

Two important points are gained by increasing the surface. First, the unit pressure on each infinitessimal area of clutch surface is reduced, thus reducing the tendency to abrasion without diminishing the holding power of the device as a whole. Second, the increase in surface also permits of more rapid cooling owing to conduction and radiation combined, as a result of which, the working temperature of the clutch is kept low and the tendency to abrasion counteracted in another way.

In this way the multiple disc clutch offers no new solution of the clutch problem, but merely an improved form of the old and familiar one. Its advantages are that with careful handling, such as might get good results from a clutch of almost any sort, it will last much longer and continue to give satisfactory results much longer than the plain cone type. When subjected to abuse, however, it is bound to give out, and though not apt to "set" as at present built, it is liable to abrasion to such a degree that renewal of the surfaces will be required.

Such a renewal may be brought about by removing all the discs, grinding them down until a perfectly clean and uniform surface is presented, and reassembling the device taking care to readjust it both in spring and pedal or lever connections to compensate for the metal which has been removed and the consequent reduction in over-all length. As this is work which should properly be done on a suitable grinding machine, and involves considerable labor, it will be seen that the effects of cale less handling are in the main more expensive than those involved in the maltrearment of the plain leather-faced cone clutch. The only requirement of that trustworthy arrangement is for a new stip of leather, which may be cut out and inserted by any mechanic with a fairly good degree of success.

It will be seen that though more expensive to build and more expensive to renew or repair, the greater life of the disc type affords a strong recommendation for it, especially as it will stand a greater amount of abuse without giving way than the older form, all things considered. By using good oil, however, and taking care to renew the supply at not infrequent intervals, washing all residue out of the case at the same time, the careful user will seldom if ever have to resort to any more strenuous measures of repair than an occasional polishing off of the plates and readjustments of the mechanism. It is even more important that it receive proper attention than is the case with the cone clutch.

Hillhouse Customs Fight Goes on.

In the hard fought case of J. T. B. Hillhouse, involving the question whether the owner of an automobile of foreign manufacture can be required to pay duty on the car a second time when he has kept it abroad a year and had it extensively repaired, a petition for a writ of certiorari has been presented to the Supreme Court of the United States by the Attorney General. The United States Circuit Court of Appeals for the Second Circuit held that duty could be collected only on the new part of the machine, but the government contends that it should be paid on the entire car. The case has been a long drawn out one and it was thought had been settled until notice of the action of the Attorney General was sent out from Washington last week.

Burglar Alarm for the Garage.

Along with the motor thief and the burgler who motors, comes the burgler of motor garages and their contents, who is becoming so much of a menace in England, as to have attracted the attention of the eager-eyed accessory maker. One of these enterprising individuals has recently perfected a special form of burglar alarm which consists of a whistle operated by compressed gas contained in a suitable tank. As installed in the private garage of the rural owner the apparatus is capable of giving an alarm which can be heard for a distance of several miles and one which, all things considered, is held to be more certain than the average electric bell combination.

COMMERCIAL VEHICLE TEST RULES

Program for the Coming Contest in France

—Formula to Determine the Final

Standing of Contestants.

The chief rules that will govern this year's commercial vehicle contest have been made public by the Automobile Club of France. There are to be eight classes, viz.: 1. vehicles carrying 50 to 200 kilogs. useful load; 2, vehicles carrying 201 to 900 kilogs. useful load; 3, vehicles carrying 901 to 1,500 kilogs, useful load; 4, vehicles carrying 1,501 to 2,000 kilogs, useful load; 5, vehicles carrying 2,001 to 3,000 kilogs. useful load; 6, vehicles carrying over 3,000 kilogs. useful load; 7, public service vehicles, 6 to 10 passengers; 8, public service vehicles over 10 passengers. No vehicle must weigh more, fully laden, than 4 tons per axle, the weight being arrived at by dividing the total weight by the number of axles.

The trial will comprise about 25 stages. Each stage will be divided into a number of sections. The average maximum speed, which must not under any conditions be exceeded in any single section, is fixed at 25 k.p.h. for all classes.

The final standing will be arrived at under the following formula:

 $\frac{T \times C}{P \times D}$, in which T represents time in hours; C the fuel consumption through the trial in francs; P the useful charge carried, to which will be added the weight of the vehicle body in kilogs.; D the distance covered in kiloms.

No speed above 20 kilometres per hour for Classes 1, 2, 3, 7, and 8, and of 15 kilometres per hour for Classes 4, 5, and 6, will be taken into consideration.

In regard to repairs, this section is divided into three categories, viz., (1) spare parts which can be changed at will; (2) stamped parts which must not be replaced except by duplicate parts officially stamped, of which each competitor may carry a certain limited quantity under the rules; (3) all other parts of the vehicle, not included in the above two categories, which may not under any pretext whatsoever be changed. The employment of pneumatics is forbidden, and no tire shod with rubber, or parts of elastic wheels, will be allowed to be replaced.

Neighbors Fight Against a Garage.

After Everett Mehrer had been stopped by the Building Department in his work of erecting a \$4,000 garage at Chelsea, N. J., he secured a permit for a building 49x100 feet. Chelsea is a fashionable residential section at Atlantic City., and there promises to be a pretty legal fight over the gafage, as the Chelsea Protective League has determined to balk Mehrer's plan of building a garage in the midst of Chelsea's pretty cottages.



ARGUSED BY AN ENDURANCE RUN

Pennsylvanians See Necessity for Better Roads—Probability of New Turnpike from Allentown to Reading.

Two important results are likely to be the outcome of the Quaker City Motor Club's endurance run to Allentown, Pa., on New Year's Day, according to advices from that city. The first of these is the formation of a Lehigh County Automobile Club; the second, a free State turnpike from Allentown to Reading.

The Philadelphia club's event was a revelation not only to Allentown automobilists, but to business men and the public in general. It also opened the eyes of citizens with an eye to civic and industrial progress. Allentown has more than 400 owners of automobiles, a splendid showing in proportion to its population of 35,423. With more than 500 owners in Lehigh county it is in a position to organize a big automobile club.

Lehigh county has taken due advantage of the new State roads law, but all the new roads so far built run to the north of Allentown, into the cement belt. This also is practically true of the Walberts pike, the creation of John W. Eckert. In other directions no advantage has been taken of the State's liberality. It was just a trifle humiliating to Lehigh Countians to hear that the worst stretch of roads encountered on the Quaker City Club's run was between Allentown and Reading, and that the Lehigh roads were even worse that the Berks highways. This has brought about the movement for a State turnpike from Allentown to Reading, a distance of 36 miles, 121/2 miles in Lehigh and 231/2 in Berks. The chief obstacle to the building of State roads in Lehigh county has been the objection of the people of the townships, despite the fact that the townships need pay only oneeighth of the cost. The example set by the automobile run, however, has had a good effect in liberalizing views, and many of the farmers feel it is about time that permanent roads be built. Another leaven is the fact that many of the farms in the townships affected are owned by residents of Allentown, where there is a wonderful sentiment in favor of paved streets. Allentown can now boast 12 miles of asphalted streets, at an average cost of about \$6,000 a block. This mileage of paved streets would be greater but for the fact that the municipality hasn't quite kept pace with public demand in the movement. Farmers coming to Allentown are of course delighted with the paved streets, and they have come to think that if city people can pay \$6,000 for a block of good road, it isn't too much to spend \$6,000 to \$8,000 for a mile of good turnpike in the country, especially when the township need pay only oneeighth, the State and the county paying the rest. Of the proposed road about 3¾ miles would run through South Whitehall, 3 miles through Lower Macungle, and 5½ miles in Upper Macungle, Lehigh county, and the cost to the townships would not be more than \$1,000 a mile, perhaps less. The total cost of the proposed turnpike between Allentown and Reading would be somewhere between \$200,000 and \$250,000, and could be finished with State aid in five years.

Two Police Wagons for New York.

Two automobile patrol wagons have been added to the New York City Police Department's rolling stock-one gasolene and the other electric. When it is determined which form of power is the more practical for the city's needs, other wagons will be purchased. The gasolene patrol wagon is attached to the Twenty-second precinct in West Forty-seventh street, and the electric makes its trips to and from the new Tenderloin station, in West Twentieth street. They are alike in appearance, but differ somewhat from the horse drawn wagons in being larger and in being painted a pea green color. The New York department expects to prove what police departments in many other cities already have learned, that the self-propelled vehicle is far superior to the horse drawn vehicle where quick action is necessary. After "seeing for themselves," it is expected that so far as possible the entire department will be similarly equipped.

Slow Running to Test the Motor.

Probably the best test of the condition of a motor is to run it as slowly as possible, observing whether its action is perfectly even or not. In many cases, to be sure, a motor which runs powerfully and well at normal or high speed, will not "hit evenly" when throttled down, owing either to improper carburation or to uneven ignition. The motor which runs perfectly well at low speed, however, usually retains its action under higher speed and load conditions, provided only it is equipped with a proper carburetter. Incidentally it should be mentioned that a prevalent and most deceptive cause of irregular running at low speeds is lost motion in the linkage between the control levers and the carburetter and timer. Where such slack exists, even a slight amount of vibration is often sufficient to throw out the regulation.

Japan Gives Precedence to Automobiles.

Japan is fast catching up to the eastern world in civilization. In the detail of recognition of the supremacy of the automobile in traffic, the land of Nippon would sem to be a bit ahead of its rival nations; for among the regulations recently issued by the police department of Tokio appears the following: "Automobiles shall have precedence in the street to fire engines, post carriages and military, funeral or the processions of the people."

CINCINNATI PLANS A MOTORDROME

Land Purchased and Half the Necessary

Money Pledged—Proposed Site Located

Amid Picturesque Landscapes.

Cincinnati may have a motordrome. Land for the project has been purchased and \$50,000 of the necessary \$100,000 already has been pledged. The men interested in the scheme are Harvey Myers, manager of the Latonia race course; Sid Black, John J. Ryan, ex-Mayor Julius Fleischmann, and other prominent Cincinnatians.

The course will not be built in Ohio, but across the river in Kentucky, adjoining the famous Latonia trotting track. That the Cincinnati project will be carried through seems possible, as the men interested in the venture have not press-agented the scheme at all; rather the opposite policy has prevailed, as the land was bought and all the preliminary arrangements made before any but the few interested persons knew anything about it.

The site for the proposed track is on the Licking river, near the Latonia property, and was purchased by Mayor J. T. Earle from the Latonia Racing Association It comprises 65 acres and the scenery is just the sort to make a popular summer resort, which it is planned to do.

Regarding the track no official details have been made public, but it is stated that it will probably be a mile and one-half course banked to such a degree that will preclude the possibilities of accidents attendant to high speeds on insufficiently banked tracks.

Besides the automobile track it is planned to make a popular resort by putting on alkinds of amusements along the line of the Ludlow Lagoon, a popular place with Cincinnatians. As soon as the damming of the Ohio river is completed the Licking river, which borders the property, will be navigable, and motor boat races upon it will be a possible feature. Naturally a large club house figures in the plans of the promoters.

Automobile racing around Cincinnati has heretofore been confined to the Latonia race track, but the managers do not court it because of the expense of repairing the track before and after each meet. Therefore the horse track people are interested in the new projet, to the extent of investing their money in the proposed scheme, and selling the property at a reasonable figure, upon condition that no horse races be held on the new track when it is completed.

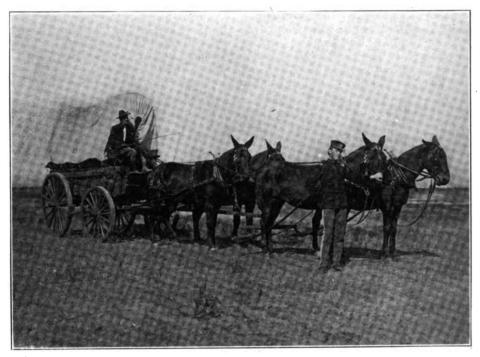
"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.



MOTOR CAR AID IN MAP MAKING

Supersedes the Prairie Schooner and Army
Mule in a Topographical Expedition
—Lieut. Gimperling's Outfit.

That beloved American military institution, the army mule, which has for so many years been at once the reliance and the dethe topographical mapping to be done covers a large part of Southern Arizona. The accompanying pictures illustrate the old and the new way of prosecuting the important sort of task to which Lieut. Gimperling has been assigned. The first shows him standing at the head of his four-mule team. The sturdy animals with the lumbering prairie schooner to which they are harnessed present a quaint and curious con-



THE OLD WAY: LIEUT. GIMPERLING AND HIS PRAIRIE SCHOONER

spair of those responsible for the army's overland travels, is threatened by the motor car. It is only an entering wedge so far, but is redolent with suggestive prophecy. For the first time in army circles a topographical mapping expedition is to use a motor car instead of a mule team for transportation across the territory under observation. The innovation is due to the enterprise of Lieut. Gimperling, of the Twenty-first U. S. Infantry, and the enthusiasm of H. M. Westcott, his personal friend, who is the owner of the machine. When Lieut. Gimperling had been detailed to make a progressive military map of Southern Arizona, he secured the permission of General Thomas, commander of the Department of the Colorado, to use Westcott's automobile instead of the mule team and prairie schooner outfit usually emploved.

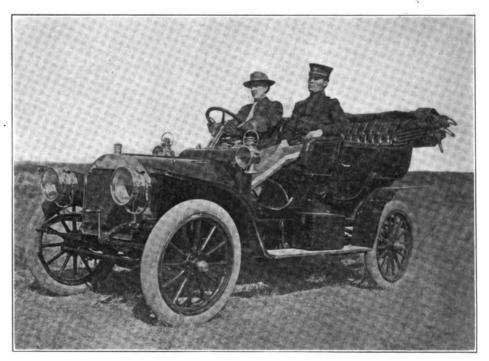
As it is, the trip will take several months, although the car, a Stoddard-Dayton, will be able to make as great a mileage in an hour as the mule team could make in a day. Starting from Denver, the party, consisting of Gimperling, Westcott and Arthur Harris, the mechanician, will go to Pueblo and thence along the old Santa Fe trail through New Mexico to Arizona. The ultimate objective point is Fort Huachuca in the south central part of Arizona, and

RIVAL FOR STEAM ROAD ROLLER

Oil Cooled Gasolene Motor in Machine for Highway Work—Other Novel Features in the Device.

The road roller is a type of vehicle, to which the gasolene motor would appear to be hardly suited because of its extreme light weight in proportion to its power. The use of the steam engine in this capacity has become so well settled, moreover, and the demand for road rollers would appear to be so small, comparatively speaking, that the development of a gasolene machine would seem to be hardly profitable. Nevertheless, a line of these machines is now being built by the Austin-Western Co., Chicago, in sizes ranging from seven to fifteen tons, the entire design being laid out with regard to the novel form of motor employed.

As a matter of fact, in at least one respect these machines have outrun their presumptive evolutionary ancestor, the automobile, in that they are adapted to oilcooling, no water being carried, and the cooling oil being used over and over in the system. In other respects they are very automobile in construction, having clutches, change speed gears, wheel steering, and single lever speed control. Otherwise they follow the time honored form of the steam roller, both in general outline and in massive detail. Fuel tanks are provided hold-



THE NEW WAY: LIEUT. GIMPERLING AND HIS STODDARD-DAYTON

trast to the spick and span automobile wherein the young officer is seated, the owner of the vehicle at the wheel, ready to start upon his journey. ing sufficient gasolene for an entire day's running, but ,by using a trailer the supply may be extended almost indefinitely, thus eliminating the necessity for a tender.

EXPERIMENTAL ROAD TREATMENT

Results of Comparative Methods Conducted in Newton, Mass.—Materials
Used and Cost per Yard.

In the search for suitable methods of construction for the American highway, there is a marked tendency to overlook importance of highway maintenance, though happily the mileage of roads once good, now grown into poor condition through neglect or careless handling is yearly diminishing. At the same time it is plain to see that however much the road makers may know of the ideals of laying foundations and building up the bed of the road, the actual working surface both in first state and in renewed condition, remains a continual source of anxiety and question. In a few notable instances, road builders are facing the matter squarely and outlaying considerable amounts in what are acknowledged to be experiments pure and simple.

In this connection the work of Charles W. Ross, street commissioner of Newton, Mass., is a striking example of straightforward effort. The stretch of Commonwealth avenue running out from Boston for a distance of five miles through Newton, has been subjected to a number of comparative treatments to which it is particularly well suited as supporting a variety of traffic. The southerly driveway is used exclusively by automobiles, while the northerly driveway is given over to carriages. An opportunity is thus given not simply for comparing the efficiencies of different methods of treatment on the same road, but also of studying the results under different sorts of usage. Commissioner Ross outlines these tests in a recent article in the Good Roads Magazine.

In 1906 one section of Commonwealth avenue was treated, 3,500 square yards of tarvia being put on," he says. "That was the first experiment we tried, and was on a five per cent. grade. The roadway was swept clean, and the tarvia came to us in tank wagons from Everett. When it got to the road the tarvia was at a temperature of about 170 degrees to 180 degrees. That road went through the winter and came out last spring in fine shape, and to-day is better than it was last year.

"I think that rubber tires have had the effect of rolling it down and keeping it perfectly smooth. There has been no expense this year on this roadway, except, when, in June, a light coat of stone screenings was spread upon it. This was rolled in by the wheels of the automobiles, and that is the only outlay on this road for over a year. The screenings are rolled entirely in now, and the road is as smooth and hard as any asphalt street, and is not slippery in rainy weather. Horses get good footing on it,

on account of the large amount of screenings that have been rolled into it.

"Another section of Commonwealth avenue was covered with tarvia this year. The work was commenced as soon as the weather became hot and dry, which was about the first of June. This preparation was applied in the way followed in treating the section previously mentioned, except that it was covered with fine screened gravel instead of screened stone. . . . During the entire season this preparation has been very satisfactory, as it has been free from dust, seems to work fully as well as the fine screened stone, and could be obtained at a much less expense. We used 28,843 gallons of tarvia and that cost \$0.1115 per square yard. These figures are somewhat higher than they otherwise would have been, because we had to haul the tarvia by teams something over twelve miles.

"The section treated in 1906 cost about 14 cents per square yard. A heavier coat of tarvia was put on, which, of course, added to the expense of the work. You can to-day take a screwdriver and lift up the surface of this roadway to the depth of over an inch. It is like India rubber, and I see no reason why it should not last two or three years without any additional expense.

"A light coating costs less in the first place, but it cannot last as long as a heavy coating. After this work was done we were so well satisfied that we tried experiments on other streets which were subject to heavy traffic. A street in Newton Lower Falls had very heavy teaming over it; tarvia was put on and spread with brooms, at a cost of 19 cents per square yard, but in my opinion it is going to last three to five years. It seems to me that a road which is subject to heavy traffic is much different from a road where there are only light carriages and automobiles. The road just mentioned was first swept, then spiked up with a roller and covered with a coat of one-inch stone. This was rolled down to a smooth surface, and something over one and one-half gallons of tarvia per square yard were applied to the stone. This was covered with screened gravel, as I have described before, and rolled in with a steam road roller.

"Another section of Commonwealth avenue was by contract treated with 'asphaltoilene.' This did not include the sweeping of the roadway and preparing it for asphaltoilene, as that was done by the city. Six cents was the price paid for furnishing and applying the asphaltoilene, which was brought to the city in tank cars and pumped into the sprinkling wagon furnished by the contractor. In some cases it was necessary to put more on the center of the streets than near the gutters, as the material flowed toward the gutters, and for about two days had to be swept with brooms into the center of the road. After that time it penetrated the roadbed enough to keep its place until the coat of screenings was applied. This could be done with a coating of stone screenings, or of fine screened gravel, which I think I much prefer to stone screenings in such cases. The road was then closed to traffic for about 48 hours. After that it was ready to roll with the steam road roller. . . . It has been there for over two months, and much resembles the tarvia road, only that it is more elastic and easier for a horse to travel upon.

"Texas oil has been used by the city and has been applied in the following manner: First we applied light Texas or fuel oil by heating the stone screenings on a sand heater, and pouring the oil upon the screenings, putting on from about 25 to 30 gallons of oil per cubic yard of stone. This mixture was turned over by shovels and piled up. It was allowed to remain about 12 hours in a large heap, then was shoveled into the teams, spread with shovels upon the surface of the road, and immediately rolled down with a steam roller,

This work was satisfactory, and in my opinion is a good way to apply oil to the surface of a street. On other streets we tried a heavier Texas oil which had more of an asphalt base. This was spread upon the street by a watering cart with perforated tubes in the rear, the flow through which could be regulated by valves to give the desired amount per square yard. This was allowed to remain on the surface of the street from ten to twelve hours, and then covered with a light, coating of screened gravel. The expense for labor was much less in this case than in the former, and the material used cost 21/2 cents per square yard. The quantity of oil used was a little less than one-half gallon per square vard, and one-half the roadway was treated at a time, allowing the other half to be used by teams, which were kept off the treated part for three or four days, until the oil had plenty of time to penetrate into the roadbed. After this there was no spattering, nor was it otherwise disagreeable to traffic.

"Another section of Commonwealth avenue was treated with a mixture of Portland cement. The surface of the roadway had been thrown off by the automobiles, was worn down to the No. 2 stone, and its center, which should have been higher, was two or three inches lower than its sides. That material was screened out and put back into the surface of the road. Then we mixed a very thin grout of four parts sand with one part cement, spread it on with large coal shovels, and swept it in with brooms. That mixture soaked down, grouted the stone together, flush up on the surface, and made it perfectly smooth. The grout was put on about the 10th of June, and has given very good satisfaction. The cost per square yard of this work in detail was as follows: Cement, 3.36 cents; sand, 0.38 cents; labor, 2.03 cents; teaming, 1.56 cents, making a total cost of 7.33 cents per square yard."

WOMEN CABBIES QUIT IN DISGUST

Frau von Papp of Berlin Found the Occupation too Strenuous—Rude Men Discouraged Mme. Lutgen of Paris.

Berlin's chauffeuse is no more! Frau von Papp, the only woman licensed as a public automobile driver in the German capital has not shuffled off the mortal coil, but she has given up in disgust the career of cab driver according to cable advices from abroad. Thus ends an innovation which aroused much interest as to the outcome, particularly in this country, where every item bearing on the sex equality question is seized with avidity by those women who would cope with men on an equality upon the field of hard labor not intended for those of the gentler and less physically able sex.

Frau von Papp has now come to the conclusion that driving an automobile cab is a work not designed for women. She says she did not possess sufficient endurance to withstand the arduous duties of the calling. Being out at all hours and the necessity of facing all kinds of weather did not agree with her, in addition to which, the baroness chauffeuse declares, the occupation of public driver is one which must eventually prove distasteful to women of finer instincts, wherever attempted, something that Mere Man thought when Progressive Woman decided to invade his field of labor. Therefore Mere Man will smile a broad smile when the baroness's conclusions become generally known.

The experiment with women cabbies in Berlin has been similar in Paris, states the dispatch. Madame Lutgen, formerly Countess du Pin de la Bueniere, has decided to give up being a taxicab driver and will attempt to secure a position as coachwoman in a private family. Madame Lutgen divided honors with Madame Dufaut in the new occupation. It was a matter of great surprise when the former countess decided to quit as it was believed she was in the business to stay. Madame Lutgen's reasons for giving up the work are much the same as Frau von Papp's. She complains of having been grossly insulted by what she declares were "dignified looking men."

"Although I received occasional tips of larger demonination than usually given to other cabbies," Madame Lutgen is accredited as saying, "still there have been days when after being out in the rain and cold all day, I have taken but one fare. Some men, too, took advantage of the fact that they had a woman cabby to give free rein to language of a most shocking sort. I do not believe being a cabby is the proper sort of occupation for women."

"Women in this business are a nuisance," a manager of a large Berlin concern that keeps automobile cabs for hire, is said to have declared. "There is no doubt that the experiment in Berlin is dead. I shall certainly engage no more women. They do not know how to take care of their cabs and they do not earn as much as the men. Women chauffeurs always expect the men to do all the work at the garage and to wait on them, which the men are unwilling to do, nor is there any reason why they should do so. Women are not cut out for automobile cab drivers."

State Association for West Virginia.

If the efforts on the part of the Ohio Valley Automobile Club, of Wheeling, meet with the success they merit, West Virginia will have a State automobile association. At the last meeting of the Wheeling organization a resolution was passed with this object in view. A convention, the date of which cannot be determined until the various clubs have been heard from, has been called to meet in Parkersburg, some time during February, when the State association will be organized. At its meeting the Ohio Valley Automobile Club voted to purchase signs to mark the highways in the county most frequented by automobilists. The county commissioners have agreed to stand half the expense. The club will purchase the signboards and the county officials will see that they are put up.

Chauffeurs Organize a State Association.

Illinois chauffeurs have decided to take hold of the chauffeur question themselves and settle it to everybody's satisfaction. The Illinois Chauffeur Association has therefore been formed to "raise the moral, intellectual and social tone of chauffeurs in the State; to assist owners to get good, efficient drivers for their cars and to exercise a guardianship over members calculated to keep them up to a high standard." The officers of the association are: President, F. M. Johns; first vice-president, A. Sanderson; second vice-president, D. F. Farrar; treasurer, G. F. Chapin; secretary, H. W. Powers; corresponding secretary, E. Wallace; board of managers, F. W. Kickbush, Thomas T. North and William O'Hara.

Inter-State Organization in Brooklyn.

Another "helping hand" automobile association has been formed, Brooklyn being the offender this time. It is called the Inter-State Motorist Association, and has been incorporated under New York laws. The association, which will provide "legal aid" to persons arrested for breaking the speed laws and will toy with legislation, is to be located at 177 Montague street.

Batchelder Heads Worcester Club.

The governors of the Worcester Automobile Club, of Worcester, Mass., met last week and elected a president and a vice-president. George W. Batchelder will occupy the chair and Charles M. Booth will assist him.

WITT WAS NOT QUICK WITTED

Might Have Escaped with Light Penalty for Larceny of a Lamp—Now Charged with Stealing an Automobile.

It would have been far better-better for himself-had F. A. Witt in the pursuit of his psychologic studies acquainted himself with Professor Munsterberg's treatises on human emotions and the control thereof; for if he had done so, doubtless he would not now be languishing in jail, charged with stealing an automobile. When Witt was arraigned in Judge Chambers's court in Los Angeles, Cal., one day recently, and asked to plead to a charge of having stolen an automobile lamp, profound astonishment was pictured on the young man's face. In a dazed voice Witt pleaded not guilty and thereby almost railroaded himself to the penitentiary. For be it known, Witt did not steal the lamp; he stole the automobile.

The car belonged to George Hart, a hotel proprietor, and was stolen by Howard Francis, J. K. Harrington and Witt. The last named was the chauffeur who drove it away. Francis was arrested shortly afterwards at Bakersfield; Harrington fell a victim to the detectives at Sacramento and Witt was "pinched" in Los Angeles last week. Harrington and Francis confessed, and on account of their previous good records escaped the penitentiary and are now doing time in the city jail. Through some error Witt was charged in the complaint with having stolen merely a lamp, and when the charge was read he was so dumbfounded that he pleaded not guilty, when an admission would probably have gotten him off with a fine. But Witt could not control his emotions and so was bound over for trial. In the meantime the charge in the complaint was changed.

Got Even for Affront to His Bull.

"Farmer John" Graham, of Upper Graham, Pa., got "square" one day last week for the bump given his big bull by a touring car along the Manatawna road last September. The bull was the challenger and was a month recovering from the shock. Another automobile of the same color, or perhaps it was the same one, opines Graham, got stalled on Manatawna hill Wednesday afternoon. Graham was at work in a field nearby. The two men and finally the two women in the car pleaded with Graham to hitch his team to the axle and pull it up the hill.

"I will for \$25," said Graham, thinking of the occurrence last summer, and planning to get even.

After much haggling, during which he described the bump the last red automobile gave his bull, the farmer compromised on \$15, paid in advance.



The Week's Patents.

868,210. Cushion Tire. William D. Mc-Naull, Toledo, Ohio. Filed Sept. 1, 1906. Serial No. 333,012.

1. In a wheel, the combination of an inner rim, an outer rim, a strip of flexible material between the rims, secured to the inner and outer rims at alternate points, blocks on the inner rim against which the strip rests, bolts passing through the strip and engaging sockets in the blocks on the outer rim, and pins passing through the blocks and holding the studs in position.

868,251. Carburetter. Leon Bollee, Le Mans, France. Filed April 4, 1904. Serial No. 201,549.

1. A carburetter comprising a variable sized mixing chamber constituted by two movable walls therein, a fuel outlet pipe extending into said variable sized chamber, and means for simultaneously and proportionately regulating the size of the mixing chamber and the opening of the fuel outlet, substantially as set forth.

868,265. Carburetter for Internal Combustion Engines. Edward V. Hartford, New York, N. Y. Filed Aug. 25, 1905. Serial No. 275,738.

1. A carburetter having a valve and automatic and frictional means for regulating the action of the valve.

2. A carburetter having an automatically acting valve and frictional means for retarding the action of the valve.

868,293. Acetylene Gas Generator. Edwin M. Rosenbluth, Philadelphia, Pa. Filed March 9, 1907. Serial No. 361,562.

1. In an acetylene gas generator, the combination with a valve casing having a port and forming a trunnion for said generator; of a plug in said casing having a port complementary to the port in said casing; and means arranged to maintain said plug stationary in said casing, substantially as set forth.

868,319. Reversible Automobile Fender. Luther P. Barrett, St. Louis, Mo. Filed March 4, 1907. Serial No. 360,509.

1. An automobile fender having the shape of a double cone and rotatably mounted upon suitable bearings.

2. An automobile fender consisting of an upwardly and rearwardly inclined axle, and a double cone of spring metal hoops rotatably mounted up said axle.

868,337. Combined Steering and Braking Device for Motor Cars. Ernst H. Geist, Cologne, Germany. Filed Feb. 26, 1907. Serial No. 359,438.

1. In combined steering and braking devices for motor cars, wheels, each being revolubly secured in individual frames connected to the chassis by vertical pivots, means to turn the wheels with their frames at will in parallel positions at an angle to the line of motion of the car and into convergent positions substantially as described.

868,404. Spark Plug for Explosive Engines. Francis W. Brady, Englewood, N. J. Filed May 11, 1906. Serial No. 316,322.

1. A spark plug for explosive engines, provided with a stationary electrode, the stem of the stationary electrode being supported in insulating bearings and being surrounded intermediate of said bearings with an air insulation space communicating with draining passages; substantially as described.

868,405. Wheel. George F. Brandenburgh, Irvington, N. J. Filed April 6, 1906. Serial No. 310,248.

1. In a wheel, the combination of a hub having a closed annular chamber, hollow spokes opening at their inner ends into said chamber, hollow felly sections independent of one another and each providing at its inner side a slideway adapted to receive the end of a spoke as a plunger, and a tire around said felly sections.

868,585. Force Feed Lubricator. Albert A. Stelting, Madison, Wis., assignor to The Madison Kipp Lubricator Company, Madison, Wis., a Corporation. Filed Sept. 26, 1905. Serial No. 280,148.

1. The combination with a rotary driving shaft and a plunger adapted to be reciprocated thereby, of an eccentric mechanism mounted on said driving shaft and comprising independent elements mounted on said shaft and eccentrically thereto and adapted to be adjusted relatively to each other to vary the eccentricity of said eccentric mechanism relatively to the axis of said driving shaft, and power transmitting devices interposed between said eccentric mechanism and the said plunger.

868,611. Vehicle Wheel. Winfield J. Mitchell, Pittsfield, N. H., and James R. Mitchell, Templeton, Mass., assignors to Mitchell Punctureless Pneumatic Tire Company, Swampscott, Mass., a Corporation of Massachusetts. Filed Nov. 14, 1906. Serial No. 343,446.

1. A vehicle wheel comprising a chambered rigid body having an inner seat, a pneumatic cushion bearing thereon, two

outer seats, an annular spacing member formed independently of the outer seats, and rigidly attached thereto, said spacing member having leg-receiving openings between the outer seats, an elastic tire U shaped in cross section, and having base portions permanently bearing on the outer seats, and leg sections bearing on the pneumatic cushion and on the elastic tire, and movable in said openings.

868,673. Automobile Transmission Gearing. John W. Lambert, Anderson, Ind. Filed March 27, 1905. Serial No. 252,332.

1. A gearing of the type set forth, comprising a driwing disc, a driven disc adapted to be brought into frictional engagement with the driving disc, a driven shaft carrying the driven disc, means for shifting the driven disc on its shaft, a supplemental two-speed reducing gearing mounted wholly on said driven shaft and embodying a sprocket wheel loosely supported on said shaft, a train of gears permanently in mesh, one of said gears being connected to the sprocket wheel and one being rigidly secured to the driven shaft, means for locking the sprocket wheel and attached gear against independent rotation to drive the sprocket wheel directly at the same speed as the driven shaft, and means for locking some of said gears against rotation around the driven shaft, whereby the sprocket will be driven through the train of gears and at a lower speed than the driven shaft.

868,689. Explosive Engine. Harry M. Neer, Columbus, Ohio, assignor to The Neer Air Cooled Engine Company, Plain City, Ohio, a Corporation of Ohio. Filed Nov. 7, 1906. Serial No. 342,334.

1. The combination with an explosive engine, of a fan shaft, connections between said engine and said fan shaft, a fan mounted upon the fan shaft, and a yielding connection between said fan and the shaft upon which it is mounted.

868,693. Device to Prevent Tampering with or Theft of Motor Vehicles. Leon Ottinger, New York, N. Y. Filed Dec. 18, 1905. Serial No. 292, 247.

1. An anti-theft device for motor vehicles, comprising a latch mechanism for the bonnet or hood, an electric switch for the motor circuit, and a lock for controlling both said switch and said latch mechanism.

868,707. Carburetter. Walter C. Schneider, Detroit, Mich. Filed Feb. 25, 1907. Serial No. 359,232.

1. A carburetter comprising a carburetting chamber, a channeled hub within said chamber, a feed inlet passage opening leading into the channel of the hub, a manually

"RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.

IF YOU ARE INTERESTED IN MOTORCYCLES

The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

\$2.00 Per Year

Specimen Copies Gratis

operated valve to control said channel, and a rotatable fan supported upon said hub below the valve.

868,728. Automobile Vehicle. Jules M. M. Truffault, Paris, France, assignor to Societe des Automobiles Truffault, Paris, France. Filed April 29, 1907. Serial No. 370,857.

An automobile vehicle comprising in 1. combination two small grooved pulleys keyed on the driven shaft, two large grooved pulleys solid with the driving wheels and independent of one another, two belts connecting each a small pulley to the large pulley situated on the same side, lateral sliding members connected by one of their ends to the rear train which carries the two large pulleys solid with the wheels, lateral rods piveted on a fixed part of the characteristics. eral rods pivoted on a fixed part of the chassis and inclosed in the lateral members, operating rods connected by one end to the lateral members, an operating lever con-nected to the operating rods, a vertical ball and socket suspension situated between the chassis and the rear train, and a friction abutment inserted at each side between the chassis and the rear suspension, subtantially as described and for the purpose set forth.

868,732. Press for Vulcanizing Pneumatic Tires. Amedee E. Vincent, Noisy-le-Sec, France. Filed June 12, 1907. Serial No. 378,563.

1. A press for vulcanizing pneumatic tires comprising, an upper half-shell securely fixed in position, a lower half-shell, the main cylinder of the press and its piston, a mov-able platen borne by the piston of the cyl-inder to which the lower half-shell is secured, a core on which the pneumatic tire to be vulcanized is applied, hydraulic jacks whose cylinders are securely fixed in posi-tion and which bear the core, springs which join the movable platen of the hydraulic press with the core, substantially scribed and for the purpose set forth.

868,752. Variable Reactive Coil. Ralph E. Barker, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 23, 1907. Serial No. 353,-627.

1. A variable reactive coil comprising a core forming a closed magnetic circuit of varying cross section and a winding on said core, the core and winding being relatively adjustable.

868,757. Oil Regulating Valve. George S. Bennett, San Francisco, Cal. Filed Oct. 1, 1906. Serial No. 336,834.

1. In a regulating valve, the combination of a valve body having a seat therein, a valve stem having a seat at its end and means to regulate the flow of fluid when the valve is full open at the valve seat,, and a flange on the valve body above the valve seat within which the valve stem slides, substantially as described.

Internal Combustion Engine. Herman Dock, Wyncote, Pa., assignor to The Dock Gas Engine Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 19, 1906. Serial No. 343,949.

1. In an internal combustion engine an exhaust valve controlling means including a cam shaft a main cam, an oppositely arranged secondary cam carried thereby and in alignment therewith and means for projecting and retracting said cam to move in into or out of an operative position, said means including a longitudinally movable inner shaft passing through said secondary cam.

INSURE YOUR MOTOR

Against wear and carbon troubles by using



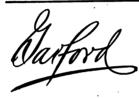
TWO GRADES-LIGHT AND MEDIUM HEAVY YOU NAME THE CAR-WE'LL NAME THE GRADE

INVADER SEMI-FLUID COMPOUND A thickened oil for transmissions

INVADER LUBRICATING COMPOUND For Compression Cups

CHAS. F. KELLOM & CO.

128 Arch Street, PHILADELPHIA



Address Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City. Western Inquiries
Garford Motor Car Co.
of Cleveland
1372 East 12th St.,
Cleveland.



THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO.

(Estab. 1851)

INDIANAPOLIS, IND.

Before You Buy a Car

telephone a Mitchell agent and tell him you want to be shown the "silent argument" the Mitchell offers in demonstration. He'll be glad to show you—call him up—it's worth money to you if you are thinking of buying an automobile. (No obligation.)

MITCHELL MOTOR CAR CO., 278 Mitchell St., Racine, Wis.



WANTS AND FOR SALE.

15 cents per line of seven words, cash with order In capitals, 25 cents per line.

W ANTED-Traveling salesman, experienced in selling large cars. Territory east of Pittsburg. Give reference and experience. Address N. M., Box 649, New York City.

FOR SALE-Model K Cadillac runabout, excellent condition, complete with top, s and generator. THE HARTFORD lamps and generator. THE HARTFOR RUBBER WORKS CO., Hartford, Conn.

A BARGAIN—1907 20 H. P. 4-cylinder Model "G" Cadillac runabout, best of condition; demonstration at any time. Address MORGAN & WRIGHT, 214 W. 47th St., New York City.

FOR SALE—Absolute closing out sale of the largest stock of new and second-hand automobiles in the United States. Write for Clearance Sale List No. 21. Now is the time to buy. ROCHESTER AUTOMOBILE CO., Jos. J. Mandery, Prop'r., Rochester, N. Y.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1.680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY KOKOMO, IND. Members A. L. A. M.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway-CHICAGO, 1702 Michigan Av.



THE \mathbf{D} IS RIGHT

Built to outwear an auto, and it will Send for Booklet

Index Speed Indicator Co. MINNEAPOLIS, MINN.

Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order.

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

THE CHANDLER CO.

Name Plates and Stampings SPRINGFIELD, MASS.

If You are Interested in Motorcycles THE BICYCLING WORLD and MOTORCYCLE REVIEW Will Interest You. Published Every Saturday at

154 Nassau Street, New York City. Specimen Copies Gratis. \$2.00 per Year.





Without Solar Equipment

cannot possibly reach its highest state of perfection, for Solar Lamps and Generators are recognized throughout the World as Standard.

Simplicity of construction is a most necessary point to consider in the building of an automobile Solar Lamps have fewer parts than any other make—each part is of heavy drawn brass.

No parts are soldered—but are riveted or screwed together. Each lamp is tested for accuracy of focus before leaving the factory.

Descriptive booklet No. 7 will be sent free upon request.

Badger Brass Manufacturing Co. Two Factories

Kenosha, Wis. **New York City**



The Largest Automobile Supply House in America

The Miller Automobile Jack



The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use and is adapted to the factory or garage, as well as to be carried as a part of the equipment on motor cars. The Miller Jack is constructed of the best material and every part is machine finished, and in material, workmanship and finish it is a high grade and one of the finest finished jacks on the market.

We guarantee this jack for 12 months, and at the price, it is the best value ever offered to the automobile trade.

We are in a position to quote a special price to manufacturers, jobbers and dealers who buy

The list price of the Miller Jack, guaranteed for 12 months, \$3.50 each.

Our Catalog-the largest of its kind, mailed on request.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 406 Erie St.

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 227 1/2-229 Jefferson Av. Buffalo, N. Y., 824 Main St.

One Price for Warner Auto-Meters

TEVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at " that " price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also - and the jobber cut the price.

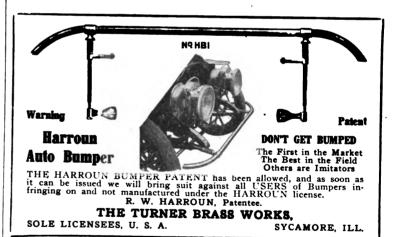
Then there was fun in the camp. That hurt us - it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co. 108 Wheeler Ave., Beloft, Wis.



START THE YEAR RIGHT



by equipping your car with

Splitdorf Ignition

You will thereby derive much more pleasure and must less ignition trouble than is possible by the use of any other

More than half a million units in satisfactory operation.

C. F. SPLITDORF

Walton Ave. & 138th St.

NEW YORK

MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

Kinwood Perfection Radiators

Kinwood Mechanical Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc. Large facilities and dependable deliveries.

K. FRANKLIN PETERSEN. 166 Lake St., Chicage, Western Representative.

THOMAS J. WETZEL, I I Warren St., New York, Eastern Representative.

THE KINSEY MFQ. CO., Dayton, Ohio.

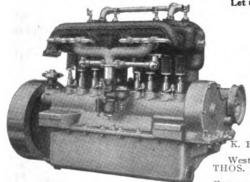
Triumph Grease

is a perfect lubricant, without gum, pitch, acids or any other non-lubricants. It will not It will not melt. Lasts 50 to .100 per cent. longer than other lubricants.

SEND \$2.00 FOR 10 POUND TRIAL CAN

The Perfection Grease Co.. South Bend, Ind.

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908

THREE SIZES

4½ in. x 4½ in.
4½ in. x 5 in.
5 in. x 5 in.
5 in. x 5 in.
4-cylinder with self-contained oiling system.
Motors are ready for coupling any standard magneto.

Our new factory and ma-chinery enable us to guar-antee quality and deliver-ies. Also clutches and transmissions. Send for

catalogue.

K. FRANKLIN PETERSON,
166 Lake St., Chicago, Ill.
Western Representative
THOS. J. WETZEL,
29 W. 42d St., New York.
Eastern Representative.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.

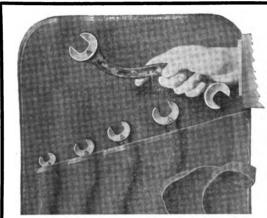
PACKARD Enameled Ignition Cable



is the choice of the most discriminating buyers.

Our new MULTIPLE LOW TENSION CABLE is a new feature. It greatly improves the wiring of any multi-cylinder engine. Samples and prices on request.

THE PACKARD ELECTRIC CO., Warren. O.



Handlest

Auto Wrenches

Wrenches (10 openings) put up in a handy KIT BAG

Get our last Catalog

The Billings & Spancer Company Hartford, Conn.

AUTOMOBILE BODIES

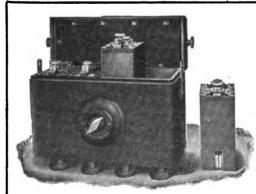


TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.



HEINZE COILS

Send for 1907 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

CIMIOTTI GARAGE

New Yerk Oity

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Tel. 2686 River.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

LASCO COLDING FRONT

Simple, effective, correctly designed Mahogany finish wood frame, trimmed in brass, 3-16 crystal plates, steel stay rods, bottom of frame shaped to dash of any standard automobile. Can be attached easily and quickly.

We make the London Tops. Write for details and exices.

LONDON AUTO SUPPLY CO. 1233 Michigan Avenue

"Jack Rabbit Adderson

The 75-mile-per-hour-car

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.

BRISCOE RADIATORS

Honeycomb, Flat Tube, Round Tube, Staggered Tube, Film Tube; horizontal or vertical flow; with or without casing; with or without pump. Fenders, Tanks, Hoods also made. Send for

catalog. Old Radiators Repaired. Send to nearest factory.

BRISCOE MFG. CO.

DETROIT, MICH.

NEWARK, N. J.



The Baidwin Chain Company

- MAKE Automobile Chains rockets, Spur and Bevel Gears.

Baidwin Chain & Mfg. Co., Worcester, Mass. U.S.A.

Logan 1908 Model S Three Ton Truck

A truck equipped with a four cylinder water cooled 40 H. P. motor, built to give service month after month and year after year, and representing the best thought of the oldest and largest plant in America devoted to the manufacture of commercial motor cars. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE, OHIO.

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

EISEMANN-LAVALETTE Magnetos

LAVELETTE & CO., 112 W. 42d St., New York

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner.

Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St. Syracuse, N. Y.

STAMPED PARTS FOR AUTOMOBILES

THE CROSBY COMPANY Buffalo, New York



For catalogues, address THE CONTINENTAL AUTO MFG. CO.



"The Pullman of Motor Cars" 1908 Models Ready for Delivery RAINIER MOTOR CAR CO., Broadway and 50th St., New York



THE LAMBERT 18 "Friction Flyer"

Write for catalogue describing our full line.

The Buckeye Mig. Co.,

Anderson, Ind.

CONTINENTAL CAOUTCHOUC COMPANY 43 Warren Street. New York

Representation everywhere.
"Keep your eye on Continentals"



MICHELIN TIRE CO..

Militown, N. J.



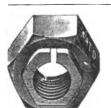
THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akren, Ohio

TRUFFAULT-HARTFORD SHOCK ABSORBER

Mark

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO... E. V. Hartford, Pres. 66 Vestry St., New York



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgepert, Cenn.



AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St.
CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.
FOBES AUTO SUPFLY CO., Portland, Oregon.
FOBES AUTO SUPPLY CO., Seattle, Washington.
WAITE AUTO SUPPLY CO., Providence, R. I.

BOSTON—292 Devonshire Street.
BUFFALO—9 West Huron Street.
DENVER AUTO GOODS CO., Deaver, Colo.
PENN AUTO SUPPLY CO., Philadelphia, Pa.



\$375 and Upwards

The automobile for winter use. Air cooled —no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY
Box No. 250 AUBURN, IND.

"VULGAN"
Sta-Rito
Spark Plugs

"KEEPS THE LID ON."

On Maxwells, Mitchells, Autocars, Americans, Glides, etc., in their contests. They'll do the same for you. Send for sample set.

THE R. E. HARDY CD., 86 Water St., New York City



Studebaker Automobile Co., South Bend, Indiana

DRAGON

Touring Oar \$2100 Roadster \$188

TWO "HAPPY MEDIUM" CARS.

Not too heavy—not too light,
Not too costly—price just right.

DRAGON AUTOMOBILE CO., Soth. 31st and Chestnut Sts.. Philadelphia, Pa.

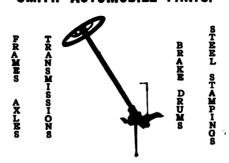
HIGH-GRADE LAMPS
Acetylene Gas and Oil
ATWOOD MFG. CO.,
Amesbury, Mass.



SPRINGFIELD TOP (at. 1897) Aluminum Bodies SPRINGFIELD METAL BODY CO., 366 Birnie Ave., Springfield, Mass.



SMITH AUTOMOBILE PARTS.



STEERING COLUMNS.

A. O. SMITH COMPANY

243 Clinton St., Milwaukee, Wis.

The Pioneer Makers of Automobile Parts.

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars. 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,000.

JACKSON AUTOMOBILE CO., Jackson, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.

ALUMINUM BODIES
J. M. QUINBY & CO.
RST. 1834
Carriage Builders, BEWARK, B. J.

111

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO 256 Jefferson Ave., Detroit, Mich

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO.
Pottstown, Pa.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed One Year

WITHERBEE IGNITER CO.,

541 West 434 St., New York

ROLLER BEARING COMPANY

Manufacturers of Steel, Brass and Bronze Balls, Ball Bearings, Roller Bearings and Automobile Axles Write for New Automobile Catalogue with full particulars of

THE STANDARD TRANSMISSION AXLE.



\$250 "SUCCESS"

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy.
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Ca., Inc. 531 Be Balivere Ave., St. Louis, Me

McCORD LUBRICATORS — RADIATORS

McKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY

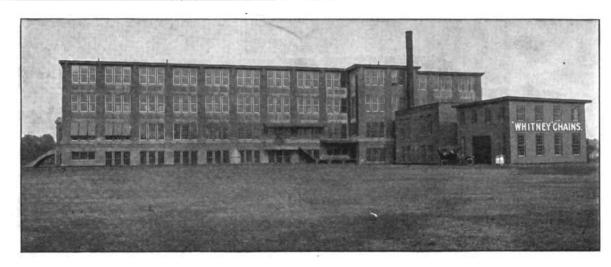
NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to
The Dotor World

for one year, commencing with the issue of	_
Name	

Address



We are now well settled in our

New Factory and

READY TO SHOW RESULTS

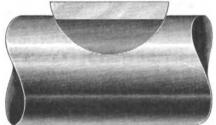
Prompt Delivery and Constant Improvement in Quality

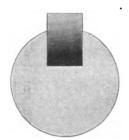
In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

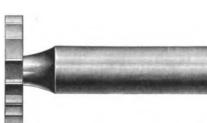
We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.

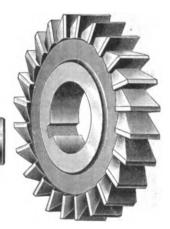


"WHITNEY" MACHINE KEYS and KEY SEAT CUTTERS
(For the Woodruff Patent System of Keying)



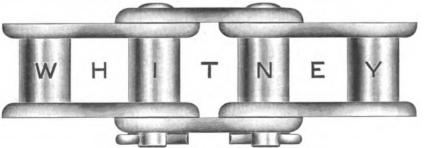






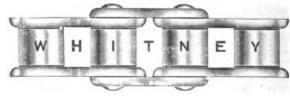
We carry 95 regular Sizes of keys and cutters in stock for immediate delivery

"Whitney" Detachable Bushing Chain-Patented



Bushing Chains are like Roller Chains-Without Rolls

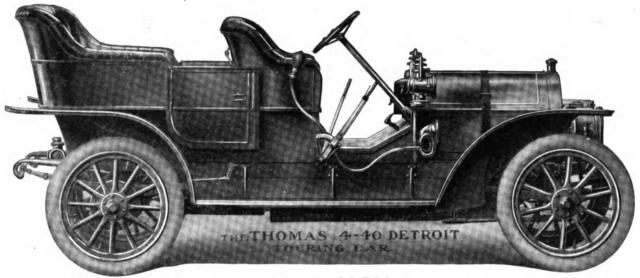
Roller Chain



The Whitney Mfg. Co. Hartford, Conn.

THOMAS 1908

A complete line of Motor Cars of the highest quality possible in Design, Material and Workmanship. They will do what you wish your car could do



PRICE, \$2,750

Thomas 4-20 Towncar

The original Towncar, designed for City and Suburban use exclusively. Beautiful bodies, quiet operation; low cost of maintenance. The Society Car.

Thomas 4-40 Detroit

Best of all shaft-drive cars. In power, speed, hill-climbing, and reliability the Thomas Detroit leads the five passenger class.

Thomas 4-60 Flyer

Winner of hundreds of contests of speed, hill-climbing, reliability, and endurance. Has more records than any American car. This year improved, enlarged, and refined.

Thomas 6-70 Special

The six-cylinder model of the Thomas Flyer, built by America's pioneer six-cylinder builders. The greatest car in America in speed, size, reliability and refinement.

Thomas Cars Succeed

E. R. THOMAS MOTOR COMPANY

Member A. L. A. M.

Buffalo.

The Mitchell

The car you can afford to buy—and keep

The Mitchell appeals to you, Mr. Business Man, because it gives you just as much pleasure—just as much and as good service, is just as stylish and neatly finished as any car, and doesn't cost you a small fortune to buy—or

The Mitchell at \$2000 is the standard automobile value.

Prove it-Mr. Business Man.

Get demonstrations of the extravagantly high-priced cars—and then try the Mitchell over the same route.

The Mitchell agent will be glad to take you out if you're interested for 50 or 100 miles any time you say. Call him up (it places you under no obligation)—Challenge him—

Just say, "Show Me."

He'll come around with a car and show you a "silent argument" that will get your order or he will retire without a word.

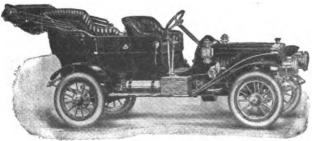
Our catalog No. 18 is fully descriptive of the Mitchell 1908 Touring Car \$2000—Limousine \$2800—Roadster \$1250 and Runabout \$1000. Write for it—we'll also send letters from users, proving the Mitchell to be the most economical car to operate.

Mitchell Motor Car Co. 278 Mitchell Street, Racine, Wis.

Member American Motor Car Mirs. Ass'n.

Just say "Show me"

This car—shown here—35 h. p., 4 cyl., speed 50 miles, finished in Mitchell blue—price \$2000—is excellent throughout—the car you ought to have at the price you ought to pay.



One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us—it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out—that

hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co.
108 Wheeler Ave., Beloft, Wis.

The Largest Automobile Supply House in America

The Miller Spark Plug

GUARANTEED FOR 90 DAYS



This plug has been on the market for the past four years and there are thousands of them in use. It is considered one of the best on the market, and is guaranteed for 90 days. Price of Standard size, \$1.50 each. We can furnish special size to fit any car on the market.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE:

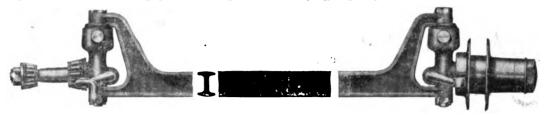
97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 406 Erie St.

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 227 ½-229 Jefferson Av. Buffalo, N. Y., 824 Main St.

The Heavier the Load the Greater the Saving

The first cost of TIMKEN equipment for Commercial Vehicles is out of all proportion to the resultant saving in up keep and increased earning power through added carrying capacity.



Timken Roller Bearing Axle

illustrated above is especially designed for vehicles doing heavy duty. This Axle is fitted with TIMKEN ROLLER BEARINGS in the knuckle head, making steering, even under the full load carrying capacity easy and simple—is forged out of heat treated steel and equipped with IIMKEN ROLLER BEARINGS in the hubs.

TIMKEN ROLLER BEARINGS are especially designed to carry as much end thrust as radial load—both principle and construction providing for an evenness of wear that does not impair or destroy in any manner the characteristics of the bearings. This is the TIMKEN principle distinctive and individual—and cannot be found in any other type or form of anti-friction bearings and that is the reason WHY the Successful Commercial Vehicle Builders use

Timken Roller Bearing Axles

Facts and figures on reduced cost, operating and maintenance for the asking.

The Timken Roller Bearing Axle Company,

Canton, Ohio

Eastern Branch-10 E. 31st St., New York

Western Branch-429 Wabash Ave., Chicago

THE BEST WAY
TO FIND A GOOD
THING IS TO LOOK
FOR IT X WE HAVE
A FIND IN THE
A FIND IN THE
A UNABOUT
AURORA MOTOR WORKS
AURORA - ILL.



MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

PARTS. ONE QUALITY—THE BEST.

OUR LEADERS:

Kinwood Perfection Radiators

Kinwood Mechanical Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc. Large facilities and dependable deliveries.

K. FRANKLIN PETERSEN, 166 Lake St., Chicage, Western Representative.

THOMAS J. WETZEL I I Warron St., New York, Eastern Representative.

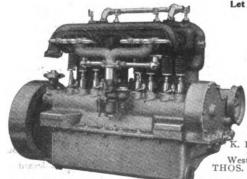
THE KINSEY MFQ. CO., Dayton, Ohio.

Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. ¶We do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. ¶It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. ¶A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. ¶It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. ¶Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind.

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908

THREE SIZES

In the sizes

4½ in. x 4½ in.

4½ in. x 5 in.

5 in. x 5 in.

4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.

Our page 1.

Our new factory and ma-chinery enable us to guar-antee quality and deliver-ies. Also clutches and transmissions. Send for

catalogue.

K. FRANKLIN PETERSON.

166 Lake St., Chicago, Ill.

Western Representative

THOS. J. WETZEL.

29 W. 42d St., New York.

Eastern Representative.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.

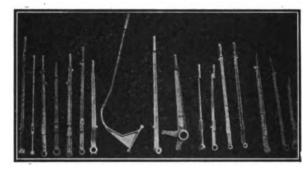
PACKARD Enameled Ignition Cable



is the choice of the most discriminating buyers. Our new MULTIPLE LOW TENSION CABLE is a new feature. It greatly improves the wiring of any multi-cylinder engine. Samples and prices on request.

THE PACKARD ELECTRIC CO., Warren, O.

PARSONS' MANGANESE BRONZE LEVER CASTINGS



Sole Makers THE WILLIAM CRAMP & SONS SHIP & Philadelphia, Penna. BUILDING COMPANY,

BODIES AUTOMOBILE

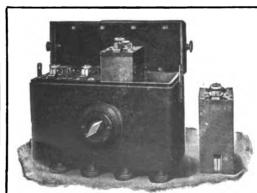


TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.



HEINZE

Send for 1907 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.



YOU DON'T HEAR MANY COMPLAINTS

from users of

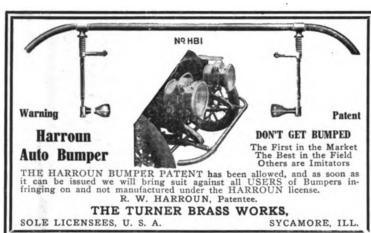
MORGAN & WRIGHT TIRES

as to excessive maintenance cost. And they probably would kick if they had occasion. Of course a few of them do, but the percentage is about equal to the percentage of motorists who are willing to swap their cars for horses.

MORGAN & WRIGHT, Detroit

Branches, Agencies or Dealers Everywhere.





Handlest

Auto Wrenches

A Set of 5 B. & S. General Service Wrenches (10 openings) put up in a handy KIT BAG Get our last Catalog

The Billings & Spencer Company Hartford, Conn.

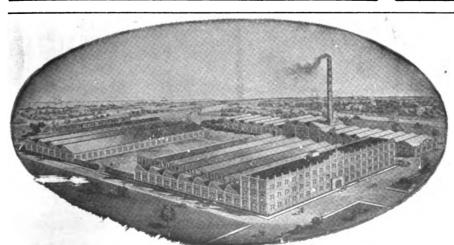
Hotel Pontchartrain

Detroit's New Hotel



Automobile Headquarters

Woolley & Chittenden, Managers



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park CLEVELAND, OHIO, U.S.A.



The Car of Steady Service

as applied to the



is more than a mere phrase, it is a title earned through correct design and careful construction and proven by years of hard, constant service wherever power-driven vehicles are known.

The practical qualities that established the Rambler reputation are,

- 1st-APPLIED POWER. By this we mean actual tractive force as applied to the road wheels. Owing to the straight line drive of the four-cylinder models and the direct chain drive in the two-cylinder cars, Ramblers have greater propelling force per pound than any other car on the market.
- 2d—DEPENDABILITY. Ramblers are built to stand the test of hard, daily service over the worst of American roads. This condition is not reached by mere weight and masses of metal, but by simple, scientific construction in which each element is stronger than the strains upon it can ever require.
- 3d-PRACTICAL ROAD VALUE. With the vast facilities of an enormous plant like the Rambler factory, skillfully directed to the production of two models only, greater value per dollar can be offered than is possible in a plant of lesser output.

In short, the Rambler is a car of

Power, Service and Value

Ordinary business policy dictates a careful examination of its many high qualities before ordering your

Our 1908 catalog fully describing two touring cars and a high-powered roadster is at your service: write to-day.

Thomas B. Jeffery & Company Main Office and Factory, Kenosha, Wis.

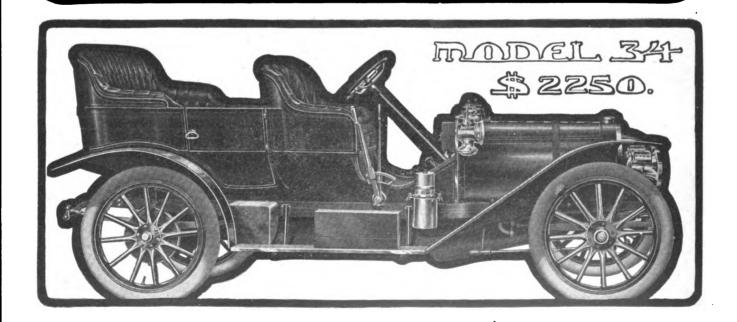
CHICAGO

BOSTON

Branches and Distributing Agencies **MILWAUKEE**

PHILADELPHIA

SAN FRANCISCO



Volume XVII.

New York, U. S. A., Thursday, January 23, 1908.

No. 17

RECEIVERS FOR E. V. CONFIRMED

Connecticut Court Makes Appointment of Barrett and Nuckols Permanent— Allowances Granted.

In the Superior court at Hartford on Monday last, Judge Shumway made permanent the appointments of Halsey M. Barrett and Henry W. Nuckols as receivers of the Electric Vehicle Co., and allowed them \$600 each for their services during the six weeks, December 10 to January 21. In doing so, Judge Shumway asked if the receivers expected to make claim for compensation in the other jurisdictions where they have been appointed receivers. Mr. Nuckols said he had not thought so. M. Toscan Bennett, lawyer for the receivers, said that he did not want to have it understood that the \$100 a week, which the receivers asked for, could be taken as a precedent for their future compensation. John R. Hills and F. C. Billings, who appraised the property of the company, were each allowed \$1,000 for the service.

Judge Shumway also made an order that all claims of creditors be presented to the receivers within four months from January 17, 1908.

Search for Missing Grout Assets.

The receivers of the Grout Bros. Automobile Co., Orange, Mass., are endeavoring to clear up the alleged disappearance of certain assets of the firm, and for that purpose Karl Grout was examined in court last week as to the reported mutilation of a ledger, and the alleged sale of an automobile at just about the time the concern went into the receivers' hands. He produced several pages from a ledger and book of accounts due, and testified to the sale of the automobile in question to a Boston man for \$1,000, half of which was received by him and the rest by Charles Grout, who is supposed to be in Seattle, Wash., at the

present time. There was also inquiry as to supplies said to have been taken from the factory and placed in a barn. The hearing was continued.

Knox Ready for Creditors' Officers.

A. N. Mayo, trustee of the Knox Automobile Co., Springfield, Mass., has called a meeting of the preferred stockholders for Tuesday, 28th inst., at which time officers of the reorganized company will be elected. Mr. Mayo reports that the resignations of all the present officials are in his hands. Under the terms of reorganizations, the capital stock of the company was increased from \$500,000 to \$1,000,000, and all of the creditors now are in possession of the preferred stock, accepted in payment of their claims, which gives them the voting power. They will elect the clerk, the treasurer and six of the nine directors at next Tuesday's meeting.

Frenches Offer to Withdraw Claim.

A meeting of the creditors of the St. Louis Motor Car Co., Peoria, Ill., has been called for January 28, to consider a proposition to be laid down by Jesse French, Sr., and his wife, Callie L. French. Mr. and Mrs. French have offered to withdraw their claim of \$61,287.21 if they are allowed to have a certain touring car which was in the factory at the time the company was thrown into bankruptcy, and also if the balance they owe on unpaid stock subscriptions is struck off. J. M. Sholl, the trustee, believes that it would be for the benefit of all the creditors to accept the French proposal.

Diezeman Liabilities and Assets.

Schedules in bankruptcy of the Diezeman Shock Absorber Co., New York, which failed several weeks since, show liabilities of \$41,913, and assets of \$4,826, consisting of machinery, etc., at the plant in Hoboken, \$3,250; accounts, \$1,504; notes. \$22; money deposit, \$50. The largest creditors are Samuel Fisher, \$22,402, and Carl Bomeisler, \$11,987.

BOOMING A NEW WONDER-WORKER

Company Demonstrating Remarkable Capabilities of a Primary Battery—Its Novelty and Construction.

A primary battery suited to all purposes to which the accumulator or storage battery now is applied, yet weighing only half as much and costing in maintenance even less than commonly is charged by city electric light companies for the use of current alone, is the alluring offering presented by the Decker Electrical Manufacturing Co., of Philadelphia, which has come to New York for the purpose of exploiting the wonders of its product. The Decker battery is the invention of Frank A. Decker, also a Philadelphian, who, on the recommendation of the Franklin Institute, has been awarded the John Scott Legacy medal and premium for "the most deserving invention." The Decker company has offices at 371 Bullitt Building, Philadelphia, but at present is demonstrating the performance of the battery in a suite of rooms in the Mills Building, 15 Broad street, New York City.

While still practically unknown to the public, the Decker battery is not strictly new, since it first came to the attention of the scientific world a little over a year ago, when it received extremely flattering notice from a number of eminent authorities. It was then stated that the inventor had been working on the idea for several years. Since then, it is said, extensive tests have been made, an automobile equipped with the battery having been in use for a year or so, and various other special trials carried out with complete success. In the case of the car, it is claimed that the mileage obtainable with the new battery was just about double that which was developed by the original storage battery which it replaced.

Generically, the Decker battery is the or-

dinary two-fluid primary cell using graphite and zinc plates, but of improved mechanical construction in several respects. The essential feature upon which its novelty rests is in the method of renewing the "charge" by replacing the electrolyte and depolarizing solutions with fresh material as fast as they became depleted. To this end a twocompartment tank is used in conjunction with the battery, and the fluids are raised into the cell by pneumatic pressure when the current service is required. When the current falls off owing to depletion of the electrolyte, the cells are drained, the fluids being allowed to mingle with the supply in the tank, and afterward the renewed solution is pumped back into the cells which are then practically as good as new. The tanks ordinarily supplied contain sufficient liquid for three charges of the battery. The tension of a single cell is 2.2 volts on open circuit, and 1.7 volts on closed circuit. The cells may be confined in any way desired.

The original spply of chemical energy for the battery thus comes from the fluid, which is a solution of sulphuric acid and sodium bichromate. The charging process, therefore, which is analagous to the "charge" of the ordinary accumulator consists in renewing the supply of liquid. In addition to this the zinc plates must be renewed from time to time—usually after 3 to 8 charges of fluid have been exhausted, depending on the rate of discharge.

The scheme of the Decker Co. includes not simply the manufacture and sale of the battery, but also the purification of the electrolyte, from which the zinc salts are electrically deposited and the fluid prepared to be used over and over. The plan is to allow customers a rebate on used solutions, furnishing the fresh supply in tanks ready to install in the plant. The zinc plates are rolled and afterward amalgamated by a special process which tends to prevent gassifying in action.

As applied to automobile use, a special form of tank is used mounted in the front of the car and so arranged that it may be tilted downward, thus lowering it sufficiently so that the fluid will drain by gravity from the battery in the rear of the vehicle. When the tank is in its normal position, the fluid runs into the battery by gravity also, so that no pump is required to effect the charging. A two-way ball check prevents the electrolyte from surging back and forth when the car is on grades. The automobile type of battery is made up of 3-cup cells, that is to say, of a group of cells each having 3 zinc and 6 graphite plates, and weighs in all some 300 pounds. With the entire amount of fluid contained in the supply tank it is capable of 500 miles of average service. The total cost including maintenance and charging is much less than that of the storage battery, the first cost being about the same at present.

The assertion is made that by the use of the battery, current may be obtained at a guaranteed cost of not more than 15 cents a kilowatt hour, as against the usual charge of 25 to 30 cents, for current alone by the average city lighting company. A very liberal demonstration of the possibilities of electricity as supplied by a primary battery is afforded at the local office where a multiplicity of dazzling lights, various appliances, such as a sewing machine, dental engine, X-ray machine and an electric forge, furnish ample means of illustration.

That those most intimately connected with the venture are by no means inexperienced in corporation matters, is testified by the legend on the door to the outer office in New York, which reads:

O. A. Turner,
Mines & Mining.
Ely Central Copper Co.
Goldfield Souvenir Mining Co.
Decker Electrical Manufacturing Co.
Mr. Troupe.

Mr. Turner is a broad man of medium height and noticeably stoop shouldered, while Mr. Troupe wears white spats. There are numerous assistants and demonstrators to show the visitor around, and no one is permitted to come away without being convinced that he has seen wonderful things.

The Week's Incorporations.

Trenton, N. J.—Swift Auto Garage Co., under New Jersey laws, with \$20,000 capital. Corporators—Charles W. S. Munroe, Robert H. Engle and David L. Swift, all of Trenton.

Cedar Rapids, Iowa—American Auto Co., under Iowa laws, with \$10,000 capital; to conduct general garage. Corporators—Ernest E. Pickering, M. A. Pickering, and H. C. Kingsley.

New York City, N. Y.—American Auto Rim Co., under New York laws, with \$100,000 capital. Corporators—W. E. Burroughs, Brooklyn; J. W. Cavanaugh and J. N. Axt, New York City.

Denver, Col.—Colburn Automobile Co., The, under Colorado laws, with \$50,000 capital; to make automobiles. Corporators—E. D. Colburn, Hittice C. Colburn, and H. E. Colburn, all of Denver.

Buffalo, N. Y.—Buffalo Ignition Co, under New York laws, with \$5,000 capital; to deal in automobile supplies. Corporators—John H. Burns, James A. Munhall and John W. Churchill, all of Buffalo.

Davenport, Iowa—Meteor Motor Car Co., under Iowa laws, with \$50,000 capital; to build automobiles. Corporators—C. N. Voss, H. F. Petersen, Arno L. Petersen. J. H. Haas, and W. F. Speers.

New York City, N. Y.—Continental Automobile Co., under New York laws, with \$5,000 capital. Corporators—Henry Best. Walter E. Godfrey and George W. Hess, 60 Wall street, New York City.

Denver, Col.—Elderkin Electrical Co., under Colorado laws, with \$100,000 capital; to make electrical current converters. Corporators—James Elderkin, Ellen M. Oviatt,

Emeline T. Rundell, Clarence A. Granger and Burton F. Rickel.

New York City, N. Y.—National Auto Top Co., under New York laws, with \$5,000 capital. Corporators—Andrew Herman and John J. Bush, 1904 Broadway; Robert Perlman, 8 East 113th street, New York City.

New York City, N. Y.—Broadway Motor Cab Co., under New York laws, with \$100,000 capital. Corporators—Samuel K. Kellock and Frank P. Reilly, 60 Wall street; Mabel Gondchaux, 218 West 112th street, New York City.

In the Retail World.

The Marshall Automobile Co. lost two cars in a fire at Marshall, Texas, on January 17th. Loss, \$3,000.

Devaney & Co., Hastings, Minn., will build a one story stone garage. It will be located at Third and Vermillion streets.

W. M. Ball, a liveryman at Devil's Lake, N. D., and C. A. Stottler, of Grand Forks, have formed a partnership and will establish a garage at the former place. Ball's former stables will be transformed into a garage.

The Elmore Motor Car Co. has opened sales rooms in Cleveland, with F. S. Rathwell and J. A. Carter in charge. The branch is located on Euclid avenue near East Nineteenth street, in the quarters just vacated by the G & J Tire Co.

The Studebaker Automobile Co., South Bend, Ind., has opened a branch house in Seattle. Wash., in connection with the Studebaker Bros. company northwest vehicle sales department at 308 First avenue, south. C. J. Zintheo, who formerly had the agency, will be in charge.

Two cars were destroyed and six others damaged in a fire which broke out in the Fifth Avenue Automobile Garage, at 45 West Forty-fourth street, New York City, Monday afternoon. The flames were subdued in fifteen minutes. A broken electric light wire is given as the cause.

J. B. Terry & Co., who have carried on an extensive electrical business in Cedar Rapids, Iowa, for a number of years, are preparing to "go into automobiles." Repair work of all kinds will be the specialty, and the building occupied by the firm will be enlarged to meet the requirements.

Ground has been broken for the new sales building of the Buick Motor Car Co., at McGee street and Admiral boulevard, Kansas City. It is to be a three story structure of dark brown paving brick with Carthage stone trimmings. The dimensions will be 95x72 feet and the cost approximately \$40,000.

Jacobs & Bartlett is the name of a new firm in Boston, and is located at 887 Boylston street. Jacobs was formerly with the Thomas agency and more recently sold the Kilgore shock eliminator, and Bartlett has been connected with the Royal Tourist agency. The firm will handle the Allen-Kingston car.

ACENCY BARS ARE NOT LET DOWN

Licensed Association Refutes Reported
Abandonment of Its Exclusive Policy

-Will Reaffirm Its Position.

Although it was reported that the Association of Licensed Automobile Manufacturers had abandoned its exclusive agency policy, or at any rate, would not longer object to licensed agents handling unlicensed cars, such proves not to be the case. It is understood that the report grew out of a circular letter to that effect which was issued by an official of another organization but General Manager Budlong, of the A. L. A. M., stated that far from abandoning the exclusive policy or winking at evasions, it is the intention of the Association to reaffirm its position and to make it unmistakably clear and emphatic that all who violate the policy will pay the penalty. Budlong is now engaged in drafting a letter along these lines.

New York Supply House Changes Hands.

The Detroit Motor Car & Supply Co., at Broadway and Eightieth street, New York City, has been succeeded by the Green-Beebe-Weed Co., Inc., the latter shaving bought the business, lock, stock and barrel. In addition to handling a complete stock of automobile accessories and supplies, the old concern was New York representative for the J. N. Willys Co., of Elmira, N. Y., which connection has now been terminated. The new company will devote itself to the accessory and supply business exclusively.

Overland Makes an Offer to Creditors.

The Overland Automobile Co.. Indianapolis, which found itself in straits due, it is said, to its sponsor, D. M. Parry, having over-extended himself in the financing of a trolley line, is seeking to effect a 40 per cent. settlement with its creditors. A number of them already have accepted the offer and if the others are brought into line it is the intention to reorganize the company, giving the larger creditors stock in payment of their claims.

Death of Daniel C. Stover.

Honorable Daniel Carroll Stover, one of the foremost and the wealthiest citizens of Freeport. Ill., died at his home in that city, Thursday morning last, 16th inst., after an illness extending over nine months. At the time of his death Mr. Stover was president of several companies, among them the Stover Engine Co. and the Stover Motor Car Co. He was in his 69th year.

Wagon Makers Choose a Manager.

Walter Wardrop, publisher of Power Wagon; has been appointed manager of the Commercial Motor Vehicle Manufacturers' Association, the foundation of which was

laid during the Chicago show. Concurrently. Wardrop announces that the headquarters of the association will be established in Chicago and that "in the future it will conduct all national shows as well as all public demonstrations of industrial motor vehicles." The officials of the organiza tion are: President, G. M. Weeks, Weeks Commercial Vehicle Co., Chicago; vicepresident, Oscar Lear, Oscar Lear Automobile Co., Springfield, Ohio; treasurer, H. F. Hamilton, Rapid Motor Vehicle Co., Pontiac, Mich; secretary, J. E. Burke, Lambert Motor Truck Co., Anderson, Ind. Board of managers; the president, vice-president, secretary and treasurer, and G. V. Rogers, Mitchell Motor Car Co., Racine Wis; Hay den Eames, Studebaker Automobile Co., Co., Cleveland, Ohio, and H. C. Eddy, American Motor Truck Co., Lockport, N. Y.

Swetland Purchases "Motor Age."

The Motor Age, of Chicago, was this week sold to the Class Journal Co. of New York, which also publishes the Automobile Although the fact is common property in Chicago, and although A. B. Swetland is on the scene, H. M. Swetland, president of the Class Journal Co., at his office in New York, refuses either to confirm or deny the transaction. Mr. Swetland has owned a number of trade publications and has been very successful in their purchase and sale.

Harper and Elliott in New Positions.

• H. B. Harper has resigned the management of the advertising department of S. F. Bowser & Co., Fort Wayne, Ind., to assume the similar berth in the Ford Motor Co., Detroit, left vacant by the resignation of E. Le Roy Peletier. Harper's place with the Bowser people has been filled by the appointment of B. W. Elliott.

Jamestown Medals for Manufacturers.

The awards made to the automobile exhibitors at the Jamestown exposition were as follows: Gold medals, Dayton Motor Car Co., Stoddard-Dayton car; Reo Automobile Co., non-stop car; Studebaker Bros. Mfg. Co., automobiles, street sprinklers wagons and trucks. Silver medal, Haynes Automobile Co., chassis.

Elderkin Electrical Incorporates.

To take over the patent for an invention of James Elderkin, which is built around a compound for converting an alternating electrical current into direct current, the Elderkin Electrical Co. has been organized at Denver with \$100,000 capital. The company expects to establish several charging stations in Denver.

G & J Philadelphia Branch to Move.

On February 1st the G & J Tire Co's Philadelphia branch will be removed to 713 North Broad street, next door to the place it now occupies. The new store will afford a corner location and about twice as much room as the present quarters.

MORE CARS FOR NEW YORK CITY

But Only One Permis of Competitive Bidding—Four Others to be Purchased by
Private Arrangement.

The New York Police Department is in the market for a four-cylinder, five-passenger gasolene touring car of not less than 24 horsepower. Bids for it will be received up to 10 o'clock next Monday morning, 27th inst., and, what makes the matter of moment, there appears to be no "joker" in the specifications which will confine the bidding to one manufacturer. The nearest approach to anything of the sort is a provision requiring that the engine shall be fitted with a governor, which, small as it is, will greatly serve to restrict the confpetition, as comparatively few engines now employ governors. The specifications are unusually far-reaching also in that they require even a guarantee of the physical properties of the steel, as follows:

"Nickel chrome steel shall be used for axles, crankshafts, all shafts, all gears, and all other important parts. Its composition and properties shall be as follows: Chromium, 1.40; nickel, 3.30; carbon, 0.30; silicon, 0.26; sulphur, 0.015; phosphorus, 0.013; manganese, 0.40. Tensile strength: Untreated not less than 110,000 95.000: pounds; elastic limit. extension in 8 inches, 16 per cent.; contraction, 60 per cent. Each bidder shall submit with his bid a guaranteed analysis and test of the steel used for the above purpose For unimportant parts, steel carrying as much as 0.025 prosphorus will be accepted."

In the matter of accessories to be provided with the car, the specifications call for remarkably generous tire equipment—rear tires, 5 inches—and these "spares": one extra front and one rear casing and four extra inner tubes for both front and rear casings—a provision which will apparently considerably reduce the cost of actual maintenance of the car.

It is understood that the specifications that apply in this instance were drawn with the view of making them the city's standard.

The New York Charities Department also desires four automobiles, but they are not to be bought in the open narket as is the police car, that is, not unless some one makes himself heard in opposition to the present plan to purchase the vehicles from some official favorite. The four charity cars will cost \$14,000, and although the city charter prohibits the purchase of anything exceeding a value of \$999, without public letting, the obliging Board of Aldermen on Tuesday last found a loophole and authorizing the expenditure of the \$14,000 in a private deal. The charity department presented the naive argument that "satisfac tory machines cannot be purchased except privately.";

THE INCOMPARABLE WHITE THE CAR FOR SERVICE



White Wins Quaker City Endurance Run

In the endurance run held January 1-2 by the Quaker City Motor Club, the White Steamer was the only car which made a perfect score on the road and also was declared by the Technical Committee to be in perfect condition at the finish. The Contest Committee would not abice by the decision of the Technical Committee. They gave credit for perfect scores to two other cars and ordered a "run-off."

The supplementary contest, held January 4th, served only to emphasize the superiority of the White. The examination then made by the Technical Committee placed the White far in the lead and, accordingly, the MacDonald & Campbell trophy was awarded to the White.

With our entry of but one car, we decisively defeated 27 gasoline cars representing 23 different makes. Thus has another important victory been added to the long list of triumphs achieved by the White—the distinctively American car.

Write for Literature

THE WHITE COMPANY

CLEVELAND, OHIO

NEW YORK CITY, Broadway at 62d St. SAN FRANCISCO, 1460 Market St. PHILADELPHIA, 629-33 North Broad St.

BOSTON, 320 Newbury St. CHICAGO, 240 Michigan Ave. CLEVELAND, 407 Rockwell Ave.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

£3 Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JANUARY 23, 1908

Street Conditions in New York.

A "Warning to Automobilists" sent to the daily press of New York City by the Automobile Club of America suggests that the municipal officer responsible for the pavement of the streets has not profited by the lesson that was intended when Governor Hughes removed the Borough President because of his failure to properly administer the business of his department in that he failed and neglected to keep the thoroughfares in a condition fit for traffic.

In their "warning" the A. C. A. specify twenty of the prominent streets to be avoided, because of holes in the asphalt, a condition which suggests the return to conditions that prevailed a year ago when the course of an automobile presented the appearance of a ship without a rudder as the machine was steered all over the streets in the desire to prevent broken wheels and axies, as well as to preserve the comfort of the occupants.

Is the re-elected Borough President entirely incompetent or is it merely a defi to the power that removed him?

Labor and the Commercial Vehicle.

While the labor problem is commonly held to be the chief stumbling block in the way of the immediate acceptance of the commercial vehicle by a wide variety of users, it is not as readily to be seen that nore resistance should be offered to commercial progress in that quarter than in the ordinary affairs of the business world. The fact that it is difficult to secure the services of treasurers who are honest and faithful in the performance of their duties. never has deterred concerns handling large monetary interests from electing men to direct the operation of their funds. The difficulty of securing good cooks never has driven the patient housewife into the kitchen, nor her husband to the restaurant. New obstacles merely introduce new methods of overcoming such hindrances to advancement, and the world at large recognises the ability to develop men in equal measure with the development of their duties as one of the greatest assets of the successful executive.

"It is a sign of administrative weakness for a concern to advertise its inability to compel its operatives to attend to duties which other concerns succeed in having performed without much difficulty"-is the terse comment of one power wagon user regarding another's abandonment of his automobile service because of the difficulty of securing efficient attendance. It is perfectly true without doubt that the causes leading to the relinquishment of a substantial investment in commercial rolling stock were in this case the same as have led to enormously disproportionate maintenance charges in other cases, and have gone a long way toward hindering the advancement of the commercial vehicle propaganda. But to discharge the horse simply and only because of the ignorance of its driver is a piece of ill-logic which should never be tolerated, and savors of a mismanagement which, except in a novel system such as that of motor traction, would not be countenanced anywhere.

The entire commercial vehicle problem at present is overshadowed by the stigma of its novelty—a stigma which prevents business men from applying to it the close analysis which they are accustomed to using in other departments of their business. If the labor problem is the greatest drawback to the successful adaptation of motor traction to existing business conditions, then it is the labor problem which must be faced. But it is pueril to regard it in any other light than as a labor problem, or to discard the system as useless when its application is known to have been faulty.

Block the "Private Arrangement"!

The City of New York finally having formulated specifications, which, save in respect to engine governors, permit open bidding on automobiles required for municipal use, on a fair and equitable basis and which, at the same time, assures the selection of high grade cars, it should be some one's or some organization's business, to insist that \$14,000 of the taxpayer's money shall not be handed out for the private purchase of the four automobiles required by the Charities Department.

It is true that the commissioner of that department is very anxious to make his "satisfactory" selections privately and that the Board of Aldermen has authorized him to do so, but those most concerned should not sit supinely and permit the "deal." Loud protest against the payment of the \$14,000 should prove effective in blocking the "satisfactory" private arrangement. The amount of the contract is sufficiently large to make it worth working for.

Motor Wagons for Farmers.

"A revolution in pleasure, a revolution in business, a humanitarian revolution"—is the manner in which an enthusiast hails the automobile. To quote the eulogy a little, further: "The railroad put a stop to stage coach inhumanities. The electric street cars put a stop to the inhumanities of city travel. Who sees a jaded team, lashed and. beaten up a slippery grade with an inhuman load, but he wonders that popular sentiment does not demand the use of auto-delivery wagons. Why should a farmer keep a two or three teams and slowly drag his produce to market when one automobile farm wagon will do the work more cheaply and quickly in a human and moral way."

Why, to make a still more pertinent inquiry—why does not some one build an automobile farm wagon that will do the work of the farmer more cheaply and quickly in a human and moral way, than his two or three teams will do?

Granted freely and gladly the three sav-

ing graces of the automobile in a revolutionary way, and granted even more--that these are an accomplished fact and not a pleasant dream-the fact remains that at present the ordinary farmer has not a fair chance of replacing his horses and wagons with a perfectly suitable equivalent. He may invest in any one of a dozen or so of motor trucks any one of which is suitable for heavy duty under certain conditions, each of which is the product of good engineering practice, and each of which will replace from two to three horsed wagons if given a fair chance. But counting all the limitations to their service which a perfectly fair judgment must acknowledge, probably none of them offer inducements such as to make them very attractive to him for the routine work of the farm.

The farmers' automobile—the light vehicle especially adapted to rural use, is a present day reality and whether a permanent type or not, is finding favor with the rural user. The farmers' wagon must be built along the same lines, psychologically at least, in order to meet with an equally cordial reception. The motor buggy appeals to the farmer because first of all it is a buggy. The motor farm wagon must also be a wagon first and always, in order to meet with complete approbation in the country districts. Not that it must of necessity have the outward semblance of the typical farm wagon in every respect, but that it must be staunch and simple; that it must not constitute too much of an innovation in the vehicular line. The farmers' wagon must be able to negotiate the stubble field, the woods road, the cart track, and the sandy highway with equal impartiality, it must be safe in operation, not given to setting fire to highly inflammable loads, simple to maintain, and easy to understand.

The stack of discarded mowers, gas engines, threshers and pumps behind many a wayside barn and the idle windmills in the fields are monuments to misguided investment and inability to comprehend the requirements of machinery, which is lamentably prevalent. But it shows that a market for farm machinery exists, quite as well as the opulence of the reaper trust shows it. The rural attraction is a strong one on the market, but it is wiser to encourage its lasting development than to handle it with regard to present sales alone. The farm wagon proposition is beyond question a winning proposition. But it must be ham-

dled on a wagon basis, because the farmer thinks in terms of wagons and he must be approached in his own language.

Types that are Disappearing.

Considerable ingenuity is being displayed in the designing of vehicles to fulfil more or less specific purposes. The time when the automobile was sufficient unto itself simply because it was an automobile, is well passed. Also, it would appear that to a certain extent the convertible body is going out of fashion. That is to say, the balloon top and the demountable limousine are giving way to the full limousine and landaulet types, while the latter affords the accommodation formerly accorded by the types mentioned. The landaulet, as well as the runabout with folding rumble, are convertible to a certain extent, to be sure, but in a totally different way, since they are useable in either of two capacities at any time. It is the special car for the special purpose, which finds most favor at the present time.

Doubtless in the range of low and me dium priced vehicles, there is and will be always, a demand for combination cars of one sort and another. Such machines must cater to the requirements of the user who is more or less cramped for money and must utilize his automobile in an economical and largely a business way. With the owner who is able to afford a better machine, however, the machine made for the purpose which is to furnish its use, is the machine which is likely to prove most attractive.

In catering to this sort of demand, the makers are acting not simply on the precedent of the carriage trade, but also with considerable wisdom. With a single chassis as a basis of construction, many different varieties of pleasure car may be constructed at comparatively low cost. A good range of types, gives the maker standing, increases his chances of pleasing the possible new customer, and further increases his chances of retaining the patronage of the old. Hith erto, much stress has been laid on mechanical improvement. This is no longer possible in the same degree, nor is it always advisable to play too strongly upon the occasional changes in design which may be thought necessary. Consequently much de pends upon the discretion expended in choosing body designs, and though the trend of the market evidently is in that direction, it is well to emphasize the impor-

COMING EVENTS

February 1-8, Providence, R. I —Show in Providence State armory.

February 3-8, Kansas City, Mo.—Kansas City Automobile Dealers' Association's annual show in Convention Hall,

February 10-15. Detroit, Mich.—Tri State Automobile and Sporting Goods Association's annual show in Light Guard armory.

February 17-22, Cleveland Ohio—Cleveland Automobile Dealers' Association's show in Central armory.

February 21-29, Newark, N. J.—New Jersey Automobile and Motor Club's and New Jersey Automobile Trade Association's annual show.

March 2-7, Ormond, Fla.—Annual beach carnival, under ausp ces Automobile Club of America.

March 7-14, Boston, Mas:—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

tance of a movement which is as certain as it is significant of changing conditions in the industry.

Accident with a Possible Moral.

Despite its scientific banking, another spectacular accident has been added to the growing list of casualties on the Brooklands motordrome in England-this one being due to a cause so remarkable as to justify comment. The basis of the disaster which ruined the car and nearly cost its driver his life, was the bursting of one of the hind tires. Instead of behaving as most burst tires do, however, this one stuck to the wheel long enough to become wedged between the rim and the frame, thus locking the wheel and completely upsetting the control. After a prodigious evolution the machine landed on the far side of a roadway which tunnels the track and on its wheels. The unmistakable evidence that the performance was due to the wedging of the wheel rather than to any loss of control owing to the deflation of one of the tires, adds another item of proof to the theory that such accidents are seldom caused by tire deflation alone. But the possibility of locked wheels may come to be held as a strong argument against the use of large tires, or what amounts to the same thing, of body clearances less than the width of the tire. If this comes to be recognized as a real menace to safety, the lesson will prove to have been an important one.

NEW MATERIAL FOR LAW MAKING

Bunch of Bills Submitted to the Massachusetts Legislature—One of Them Provides for a Codification.

That the Massachusetts legislature will get busy, as usual, in tinkering the automobile laws was made evident long before that "Great and General Court" convened for its annual six months' job. In the shape of petitions, recommendations and formulated measures it already has a large supply of raw material on hand, while the committee hearings that undoubtedly will be given on some of the propositions will add to the volume. That some of the material will be raw indeed may be argued from past legislation on automobile matters in the old Bay State. At the same time, there is much that can be done to better the legal path of the automobile there, and some excellent suggestions are available for the steering of the solons.

The Safe Roads Automobile Association is responsible for no less than eight formulated bills which have been offered.

With the aim in view of reducing the laws relating to motor vehicles to a compact and consistant whole one of the bills provides for a codification. The automobile law has been amended so frequently that it is a somewhat difficult task to piece together the original enactments of 1933 and the subsequent changes. Two other bills are intended to perfect the law of the road. One provides that all vehicles shall carry at least one light from a half hour after sunset until a half hour before sunrise.

The second road bill of the Safe Roads Association provides that every vehicle must keep on the right side of the highway, whenever any other vehicle is in sight and whenever there is not an unobstructed view for at least 100 yards ahead; that no vehicle shall pass another going in the same direction unless the driver has an unobstructed view of the highway ahead and can pass without interfering with vehicles coming in the other direction. Under this bill all vehicles would have to keep to the right on corners and a vehicle coming in the opposite direction from that intending to pass would have the right of way.

The other bills have to do with the Highway Commission and in a general way increase the power of that board. One bill provides that the commission may summons witnesses and pay witness fees, a privilege which the governor has recommended and the commission itself has asked for, in order to make more effective its investigation of infractions of the law.

The Highway Commission in its annual report recommended that a law be passed whereby the Commission could have the assistance of the State police in making in-

vestigations. The Safe Roads Association goes further than this for it has put in a bill providing for the appointment of not more than four persons with powers of police officers, whose duty it shall be to investigate the causes of any accident in which a motor vehicle is involved, which results in the death of any person, and such other accidents as the Commission shall think it desirable to investigate. bill, if passed, would provide the Commission with practically the same equipment for investigating motor vehicle accidents as the Railroad Commission now has for investigating railroad accidents, and the same sort of duty would be laid upon the Highway Commission as now rests upon the railroad board.

It is further provided in the bills of the association that the license of any operator who has caused the death of a person shall be at once suspended, and shall be revoked unless the Highway Commission, after investigation and hearing, decides that the accident occurred without serious fault on the part of the operator. A person whose license is so revoked cannot have his license renewed for at least six months, nor thereafter except at the discretion of the Commission.

It is also provided that the Commission may suspend and order delivered up the license of any operator whom it has reason to believe is an improper or incompetent person, or is operating improperly or so as to endanger the public. The Commission may reissue the license if upon examination it decides that it should be reissued, Under this provision it would be possible for the Commission to cancel any license and require an operator, private or professional, to pass an examination.

Still another proposed change in the law is that the license of any operator who is convicted in a court of operating recklessly or so as to endanger the public, or while under the influence of intoxicating liquor, shall be suspended until he is acquitted, if he appeals, unless the Highway Commission, after an investigation or hearing, decides to reissue it. This provision would not apply to overspeeding cases.

Other bills of the Safe Roads Association are intended to extend the provisions of the law which provides for fine and imprisonment in certain cases, to cover cases in which operators, after causing a serious accident to persons or property, run away without justifiable excuse, and to cover driving without displaying registration numbers, when such numbers were not displayed in an attempt of the driver to conceal the identity of his car. A further provision applies to cars from outside States and provides that during the seven days in which they may be driven in Massachusetts without being registered they must display the registry numbers of their home State substantially as provided in the law for display of numbers issued by the State of Massachusetts.

NANTUCKET AGAIN IN THE RING

Islanders Win First Round in Massachusetts
Legislature—House Passes Bill Tending to Bar Automobiles.

Nantucket has entered the Massachusetts legislative arena for another bout with the automobile. The islanders, those of them who are afflicted with motorphobia, are possessed of that pertinacity which made them successful whalers in the days before the rock drill superseded the harpoon in the production of oil. They have had to take the count in several preceding bouts, in court and before the Massachusetts Highway Commission, but immediately after defeat they have gone into training for another go. This time they have won the opening round by securing the passage in the House of Representatives of a bill that emphatically is drastic.

This bill provides that the selectmen or Nantucket shall be authorized to regulate and prohibit the use of automobiles and motorcycles on any highway in Nantucket. This, of course, gives that board power practically to exclude such vehicles from the whole island, as the only terminus of the steamboat line plying to and from the mainland can be reached by no road not under the jurisdiction of the selectmen. The bill further provides that the decision of the selectmen shall be final, which, in effect, would place Nantucket roads beyond the jurisdiction of the State highway commission. That body, it will be remembered, is committed through its chairman, against any such entire exclusion of automobiles from the island as the selectmen of Nantucket have attempted, and this feature is a vital one in the bill.

The next round in the bout will be decided in the Senate, and it remains to be seen whether the forty men constituting that body will, in their concentrated wisdom, endorse the action of the House. It is doubtful. The House is a somewhat unwieldly body of 240 men, in which young city politicians and inexperienced rural legislators are two very conspicuous elements. The senators, as a rule, are men of large affairs, experienced lawyers, and legislators who have had some training for the work. They will be more apt to see that the Nantucket measure is special legislation of a mischievous character, and the bill, if it does not fail entirely, is likely to go back to the House greatly modified.

Worcester Wants Hill Climbing.

The Worcester Automobile Club, it is understood, intends again to put in its bill under which it hopes to revive its hill-climbing contest on Dead Horse Hill or elsewhere. This bill gives town or city authorities the right to close roads on which automobile contests are to be held.



SAVANNAH AWAITS THE ENTRIES

Thirty Required to Assure the Three Stock
Chassis Races—Local Enthusiasm
for the Meet.

If thirty entries are secured before March 1st next, the proposed three stock chassis races of the Savannah Automobile Club will be held over a course near the Georgian city during that month. The dates selected are Tuesday, March 17th, and Wednesday, March 18th. Rules for the proposed meet were formally adopted by the Technical Board of the American Automobile Association this week.

Three events have been provided, as follows: for stock chassis with engines limited to a maximum piston displacement of 575 cubic inches, 360 miles; for stock runabout chassis with engines limited to 375 cubic inches, 150 miles, and for six cylinder stock chassis with engines having a greater piston displacement than 575 cubic inches, 150 miles. The long race is to take place on Thursday and the other two on the day preceding, that for runabouts in the morning. Unless fifteen entries in the long race, ten in the event for runabouts and five in the six cylinder class are secured, the meet will not take place.

There is nothing new or startling in the rules. They provide that no car shall be eligible that essentially is not a stock car, or rather a stock chassis, one that is so constructed that it can, by adding the necessary parts, be assembled into a complete car of its kind. Also that the car entered shall be subject to sale at the list price and orders be accepted by the manufacturer for any number of exact duplicates. The cars must be the product of a recognized manufacturer who during a period of one year prior to February 1st, 1908, shall have built not less than 50 cars of all models, of which not less than 10 per cent. shall have been manufactured of any model entered.

Although there is nothing unusual in the rules several features are manifest. One is that while the chassis may be stripped of lamps, lamp brackets, guards, guard irons, running board, irons and step, it must carry the regular stock hood, the loss of which during the race will result in disqualification of the car. In respect to the location of engine, transmission, dash, steering wheel and so on, the car must conform to standard equipment. The matter of exhaust is made optional with the entrant. It may be directed through the side of the hood or under the car, and in the latter case must be horizontally pointed backward, with the rear end sufficiently high to prevent throwing up dust.

To qualify for either of the three events a car will have to show that it can cover a mile over a substantially straight measured course, under official observation of a committee of three members of the Technical Board, at the rate of 45 miles an hour.

There will be no weight limit, the restrictions being in piston displacement as stated previously. The driver or mechanicien or both may be changed during the progress of the race, if necessary. All repairs and adjustments, including tire replacements, are to be made on running time and by the occupants of the car. No extra parts may be carried, excepting tires.

Manufacturers are limited to enter two cars in each event and the fees vary.

Road Improvement Work in Florida.

Thomas H. White, president of the White Sewing Machine Co., and the father of Windsor, Rollin and Walter White, of the



THOMAS WHITE AND HIS TRESTLE

White company, has recently been doing considerable work in improving the roads between St. Augustine and Ormond, Florida. Mr. White has a fine winter home at Daytona and frequently makes the trip to St. Augustine in his car. There are innumerable little creeks without bridges along the road and it occurred to Mr. White that suitable automobile bridges could be built across these streams at very little expense. Accordingly, he has contrived what has been dubbed by his neighbors "The Incomparable White Motor Car Trestle." This device may be described as made up of two troughs each consisting of a plank laid horizontally with a plank fastened on either side in a vertical position. The latter, besides strengthening the trestle, serve as guides for the wheels. The two troughs are connected by cross pieces which keep them the proper distance apart, this distance corresponding with the tread of an automobile. Since Mr. White engaged in his work of bridge building the automobile trip between St. Augustine and Ormond has lost all its terror and more tourists are making the trip than ever before. In addition to bridging the streams, Mr. White has had the laborers from his estate at work cutting down the branches and bushes which project into the roadway.

ENTRIES FOR THE LONG RACE

Promoters of New York to Paris Run Announce Ten Have Been Made—Schedule for Early Stages.

Although the complete details of the proposed New York-Paris race are as yet shrouded in beautiful uncertainty, the New York newspaper which has taken upon itself the burden of managing the American end of the affair, this week announced that ten "formal entries" had been secured, and that there are four other European and two American cars in prospect.

Of the number already said to be entered, four are American and are named as a Thomas, Maxwell, White and Hol-Tan. The other cars and country of manufacture are De Dion, Moto-Bloc and Sizaire-Naudin, of France; Italia and Brixia-Zust of Italy, and Porthos of Germany.

The New York promoters state that a meeting of the American entrants will be held in New York City this afternoon (Thursday) when they will discuss conditions of the long ride across the United States to Alaska, to Asia, and thence across Siberia, Russia and Germany to Paris.

Although there seems to be an undercurrent of opinion that the so-called New York-Paris "race" organized by Le Matin of Paris, the same newspaper that promoted the Pekin-Paris trip last year, will be called off at the last minute because of the lateness of the season and the consequent improbabilities of the cars being able to reach Nome before the melting snows commence to run, preparations are going on for the journey across the American continent. Several cities are preparing to welcome the explorers and the itinerary from New York to Chicago has been fixed.

A five day schedule has been laid out between this city and Chicago, and the run made so that the cars will keep practically together for that distance at any rate. The first day's run, as announced, will be to Albany, a distance of 148 miles. This will be the shortest of the trip, so arranged that a start may be made from New York at an hour late enough in the morning to enable the photographic brigade to take a sufficient number of snap shots to provide illustrated matter for some weeks. The second day's run will be to Rochester, 248 miles, and on the third day the night's stop will be at Cleveland, a distance of 271 miles, the longest of the five. The fourth day's run will stop at Waterloo, Ind., 204 miles, the first day bringing the tourists into Chicago. 162 miles, where the Chicago Automobile Club is preparing to "spread" itself."

No car will be allowed to leave Chicago before 9 a. m. Thursday, February 20th after which it is expected they will be permitted to go as they please to San Francisco.

Motor Cars as Mediums for Municipial Graft

Eighty Per Cent. of Their Use in One City is Illegitimate—Use Taxpayers' Cars and Chauffeurs as Conveniences for Officials' Families and Friends—The Frightful Narrative of One of the Chauffeurs

Who Mistook the Profession but Who Kept a Diary.

Perhaps because his sensibilities have been dulled by long continued repetition of stories and instances of unfaithful or conscienceless service rendered by city officials or employes, the man in the street is too prone to accept that sort of thing as a matter of course. He presupposes that practically every man employed by a municipality owes his job to "political influence" and he does not look for faithful service from politicians. That such assumptions are not wholly true has small bearing on this story.

In a general way, this man in the street has become possessed of the idea that since automobiles came on the scene and were placed at the command of city officials and department heads that a new form of "graft" and unfaithfulness has been developed. Very many men identified with the automobile business are well aware that the evil has attained huge proportions and after two years spent in the automobile service of a large city, I feel quite competent to say that there is no form of city property that is so largely misused and abused or so generally and grossly and shamefully converted to private use as the automobiles paid for by a generous and long-suffering public.

Luxury at Public Expense.

With a few notable exceptions, these automobiles are to all practical intents and purposes, private equipages. I know that I am well within the bounds of conservatism when I assert that 80 per cent. of their use is wholly private use. There are some of the cars that usually contain a city official when "joy riding" is the pursuit, and its misuse thus is given the color of authority. But there are others that are as often used by the officials' wives, daughters, or friends. One of the most conspicuous commissioners of the city of which I write and who is a boon companion of the mayor himself, is one of the most notorious offenders in respect to this department of "graft." His family regularly uses the city's car and driver and fuel for shopping and for nearly all other pursuits of convenience and pleasure.

The cost of upkeep, that bugaboo of the motorist, never concerns these public servants. Their use of automobiles is ideal use! They buy whatever becomes necessary with a free hand and the city repair shop keeps the cars in "apple pie order." The cars are supplied free and no expense—to the users—thereafter attaches to their use If it were possible to obtain a truthful accounting of the cost of this phase of "mu-

nicipal ownership," the figures surely must stagger the tax-payers who foot the bill.

The occupation of driving a city's car naturally affords an insight into the conditions that exist and it is my purpose to detail them as I found them. I say in advance, however, I do not see how any self-respecting and educated man can hold the position of chauffeur and retain his self-respect. I myself had a rude awakening in this regard, which I think makes it fitting that my first article should deal rather largely with the autobiographical and even egotistical and require frequent use of the personal pronoun, but for all of that, I think it serves the object of placing the job of "chauffeuring" in a light in which it has not previously been placed.

Status of the Chauffeur.

I frankly confess that there is a great deal of pride in my makeup-or shall I say self-respect?-for I have always held that no honest work is dishonorable, yet I cannot feel that the converse of that is true, that all honest work is honorable. For surely for one, to whom has been given the advantages of an education, whose parents have bequeathed a good name and the training which entitled him to associate with gentle bred folk and to be one of them, cannot in justice to himself, or in justice to those to whom he must make accounting of the stewardship of the talents entrusted to him, retain a position which society classifies or grades as menial, which requires a labor easily performed, a technical knowledge quickly acquired and involves a personal appearance of sufficient untidiness to preclude the possibility of sitting at table with those whose clothing is neat, hands free from dirt and grime and nails clean.

Now in using the word "society" I do not want to be construed as meaning that social set comprised of the idlers of fashion or any moneyed class; for I have ever had a humorous tolerance of them amounting almost to contempt. I have always thought of them with pity and known myself to be better than those who could not earn a living if thrown on their own resources, so when I say "society" I want to be understood as using the word in the sense of "that collective body of persons composing a community."

As a child I was given the usual education that is thought wise for the children of parents who have means: the general run of mathematics, English, modern and dead languages. I was not especially proficient in any branch and was remarkable only for a retentive memory.

From early childhood I possessed the quite common boyish trait of dissembling mechanical contrivances, and I could essemble as-well. My toys, a clock or watch were made to reveal their reasons, then restored and continued in their intended capacities. In boarding school a small steam engine, obtaining its energy through a hose attached to the steam heating system, was a source of exquisite delight for many years; to be sure the engine was but a part of the whole, for by belt of thread miniatures were made to move and notes sent the length of the long hall, where at intervals the correspondents returned the replies. Batteries and small motors were also among the assets and served to develop an interest in electricity.

At college I made the 'Varsity nine in my freshman year, an evidence that athletics had found favor in my youth; the tennis championship came to me, and I did well in cycling and sprints. I entered enthusiastically into the life of my fraternity and took keen interest in a debating society of which I was one of the speakers. My mechanical tendencies were not strongly in evidence during my university life though several labor saving devices were to be seen such as an ingenious scheme of lowering and raising shades from my bed, of regulating the ventilation and extinguishinging the light when I had read myself into a condition of sleepiness. Then, too, there was an electrical alarm to warn me of the approach of sophomore invaders in time to escape through a window from their natural curiosity as to my ability to row, while seated in a wash basin of water with lead pencils for oars, to sing, declaim, etc.

Turning to Mechanics.

Finishing college with eyes much impaired from reading in bed and a fair record in studies, I accepted a position, offered by a friend, with a large electrical manufacturing company, where, starting at \$3 a week I served a year as machinist's helper and in various grades until I became one of many "electrical experts" at seven dollars; I had taken the regular "student's course" and was considered equipped now to earn a livelihood. Another year devoted to yachting, riding to hounds, etc., with an occasional glance at a card table or wheel, was soon over, and I became linesman on a surveying corps of an important electric railroad, from



which work the change to a municipal position seemed but the following of a natural bent and I became a civil service employe in, say, the Leaks Department of—well, never mind the name of the city. It occupies a very large place on the map.

For two years the routine work of leaks department inspector furnished an endless source of interest.

The extent of my territory was so great that I was naturally interested in anything which promised transportation possibilities in place of the horse and carriage, or public traction companies. Because of this interest I had bought a motor bicycle and made it reveal to me its mysteries, my first contact with an explosive engine. By it and from it I learned of the jump spark and timing of valves and their why for, until I felt competent to handle a more ambitious vehicle.

Amateur Chauffeuring.

At this time there was stored in one of the city's stables a motor car which, having been a source of trouble to the commissioner, had been discarded and was forgotten as an asset of the department. I knew of its existence and asked for it for my own use. As my position would not warrant the expense of a chauffeur, the salary of his position being twelve hundred, whereas mine was but a thousand, I operated the machine myself, soon becoming able to get most satisfactory results, in fact, so satisfactory that the car with me as an operator was in frequent demand by officials of the department whose work did not justify the maintenance of a motor outfit for them; in consequence, I often become actually the chauffeur of my confreres, my own official identity being sacrificed to this new demand on my utility.

I am not sure but that the work I was now doing so frequently was more agreen ble than my regular duty. On days when I drove for another I had no report to write out, and my eyes welcomed this relief, for frequently the evening hours were required for detailed statements of conditions observed or complaints answered. The freedom from confinement in an illsmelling, poorly ventilated court room where much of my time was necessarily spent; the absence of "scenes" when we arbitrarily removed a "contagious disease" from protesting relatives to reception hospitals. The freedom from necessity of antisentic baths after contact with disease; no sickening cellars or putrid privies, or any of the thousand disagreeable features which, after the novelty of the work wears off, are not compensated for by the humor or enchanced by repetition. As an offset of this was the grease which left its impression on the hands and nails, or clothing, and the dirt which seemed to cling to all over you when a tire had to be replaced.

My relations with the men I drove, my associate officers, had not changed because of my assumption of new duties and releas-

ing myself from old responsibilities. We drove about from ward to ward, smoking, laughing, stopping at my home for lunch if in that vicinity, or at their homes if more convenient; at restaurants where one or the other discharged the reckoning, and at all times and in all ways the social condition was unchanged.

In the Regular Ranks.

Week by week the number of hours given to my regular duties became less and less until finally there was seldom a day when my own work was as important as my driving; when this condition arrived 1 began to give serious thought to the advisa bility of transferring to the mechanical department, where as a "gas engine expert" my salary would be two hundred better a year, and with no responsibility, or any of the disagreeable conditions consequent to the work of "Board Inspection," and my duties would be the same as at present. I thought of my social status and felt that it would not be altered by the mere fact that I was accepting twelve hundred dollars for services I had been performing for a thousand. To be sure, I would become a chauffeur, but a chauffeur for the municipality, engaged in city's work, a thing different from the groom or coachman, different even from a private chauffeur, who accepted tips, ate with servants and ranked between a secretary and a valet, above the coachman, less than the stenographer. Deciding to do it I sought the commissioner with my request for a transfer and explained my motives; his negative reply was, paradoxical, as it seems, very positive.

"Why," he said, "I can't pay twelve hundred for running an old clap-trap that ins't worth two hundred."

"But," I responded, "if I can get, as I have been getting for the past four months, as much service out of a machine not worth two hundred, as your chauffeurs are getting out of your modern expensive cars, am I not worth at least as much as they?"

He pondered a moment.

"Take me out this afternoon. If you can get results out of that machine, I'll transfer you." A few days later I was transferred.

From the first I enjoyed the new conditions. With sole charge of the car I found opportunity on rainy days to develop a closer acquaintrance with it; I actually became fond of it with a fondness one sometimes has for things of close association; it became that curious thing we sometimes hear of but never see, an almost entirely reliable car, always ready, always going I seemed to know its whims and humored it and it repaid in kind. Then the finance bureau condemned it and at auction it became the property of a second-hand dealer who paid the sum of two hundred and forty for it.

Types of the Chauffeur.

While waiting for another car I spent my time in the department machine shop

where was sufficient equipment for any work from turning down a crank shaft to cutting threads on a rivet. Now came my first opportunity of getting acquainted with my fellow employes. Of course, I had known them, even before I had become one of them, but my acquaintanceship was casual and even their names were not surely fixed in my mind. One was the best "ground getter" I ever have known. He was hard on his car; he used the emergency brake all the time, but his eye for distance was so acute that he would take at high speed an opening between trolley car and lamp post just wide enough to permit passage, leaving the padlocks from the side baskets on the street where they had been scraped by obstructions on both sides. It seems incredible, but it is true. I have seen him do as much. Socially he was unmentionable

Another was about as good, but even more reckless—a harum scarum individual whom everybody liked. He kept his car in a condition requiring constant overhauling, and drove when so full of whisky that he had to be held in his seat. He has turned his car to avoid a collision when traveling so fast that the skidding tore off both rear tires, and this on a popular thoroughfare of a busy city, at the noon hour. He was ready for fight or frolic, had a keen nose for commissions on lamps, tires or spark plugs, and possessed political backing.

Another was a splendid fellow who had been forced from boyhood to earn his living; he was a machinist, a mechanic, a good careful driver, reliable and honest.

The "boss" of the automobile shop, though a chauffeur like the rest of us, had successfully bluffed the powers into thinking him so expert a shop hand that his services were required in that capacity. In point of fact, he could not cut threads on a bar or bolt and get them to size. Eventually they fired him, and in his place came a good machinist who quickly left to accept a better paying position, being succeeded by another, a delightful, quiet, competent mechanic, who brought order out of chaos and reduced expenses by making parts, instead of buying them, for the foreign cars.

And last, there was Gus, the Beau Brummel of the outfit—"Heiny," we affectionately called him. He was first a helper and later was made a chauffeur. He was the one who wore "clothes," who attended soirees, who called our attention to his figure, to the symmetry of his legs, the shape of his foot, to his muscle, in fact, to everything about him, until his conceit, which passed all understanding, actually endeared him to us for the amusement he created, one whom we otherwise would have found common-place.

Such were my associates. Others had come and gone without leaving any impress of their individuality. Some were good; some knew nothing; one, who headed the civil service list before the position was



SMARTNESS IN A NEW VICTORIA

Latest Offering in the Stoddard-Dayton List an Attractive One—Mechanical Characteristics of the Vehicle.

An extremely neat and attractive victoria body, somewhat suggestive of the cabriolet in general outline, yet thoroughly a victoria in the luxurious appointment of its rear seat, is the newest offering on the rapidly growing list of Stoddard-Dayton cars. It has just been announced by the Dayton Motor Car Co., Dayton, O. It is known as the Model 8-N Victoria, which indicates that it, is an adaptation of the

The mechanical characteristics of the machine are: quadruple motor, with cylinders 37/8 by 33/4 inches bore and stroke, rated output 18 horsepower. Transmission by selective sliding gearset and cardan shaft, rear axle of the full floating type. Three forward speed changes are provided, and both gearset and rear axle parts are mounted on Timken adjustable roller bearings. The wheel base is 101 inches, the road clearance 9 inches, and the wheel and tire sizes are 30 by 4, front and rear. Semi-elliptical springs are employed, both front and rear, the former being 36 and the latter 46 inches in length, both sets being 2 inches in width. There are the usual foot brakes on the transmission shaft and double emergency brakes on the rear wheels. The regular

to that effect. Then he left.

A city election at this time gave us a new administration. We came under a new commissioner, and among his appointments was—call him an inspector, a young colegian who, fresh from his university, had made no attempt to earn his livelihood, though anxiously casting about for the field in which to begin. To him was assigned a low powered rear entrance tonneau car of old vintage, with a record of many miles to its credit, or rather history, and I was assigned with the car.

put in the non-competitive class-was cer-

tified to us for trial. He had trouble in

starting a car on which two sections of the

coil were broken down and accepted the

suggestion of one of the men that the

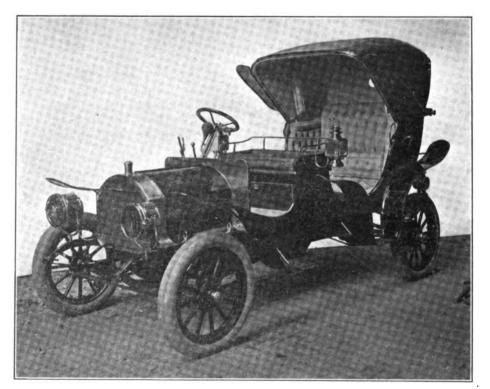
spark coil needed "charging," and took it

to the master mechanic with a statement

That my position may be better understood, I will explain that my evenings had always been spent at home, of which I was passionately fond. Literature and study were my pursuits, and I had never been required for work beyond four or five o'clock. Imagine then, if you can, the wonderment of my first day's work when at seven I was offered money with which to pay for my supper, while the superintendent and a friend went to a restaurant for theirs. The "tip" was declined and I waited with growing indignation for the next development. It came in about an hour, when with some of his friends, I took him on a round of clubs where presumably congratulations were the order. About midnight I stabled, and so ended my first day under the new regime.

The next morning we started again and scoured the city like a fine tooth comb, up one street and down another, into hospitals, police stations, comfort stations, halls, lodging houses and what not, until I wondered if the little 10 horsepower didn't want a rest. We kept this up until about four, when I drew up before a private dwelling, surmising what sort of affliction could have visited that home. Two hours later 1 knew, for the superintendent came out followed by a dainty woman whom he tenderly helped into the tonneau. I removed, at his request, the "D. P. L."-which may as well be considered as standing for Department of Public Leaks as for anything else-sign on my radiator and turned my course toward one of the largest of the downtown restaurants.

The young "inspector" was beginning to play the graft game early in his career. But this was merely the beginning. He "improved" amazingly as he went along. Of these "improvements" and other things I purpose telling next week. With the preparation of this article in mind and at the suggestion of the Motor World, I kept a diary for many months. It was kept faithfully enough to preserve the names of most of the deputy's friends, both male and female. It would be improper to term all of the latter ladies



STODDARD-DAYTON VICTORIA

chassis employed in the landaulet of the same characteristic, but owing to the complete alteration of its appearance under the new conditions it must stand as practically a new vehicle in every sense of the word. In its newness it also is thoroughly up to the mark in style. And style is fast coming to be an important factor in automobile body design, particularly as applied to vehicles destined for city use almost exclusively.

As the picture clearly proves, it is a vehicle of comfort first of all, in which the rear section is considered of prime importance. The use of the open-backed driver's seat in front gives a tinge of dignity to the vehicle suggestive of liveried servants and stately progress. The general outline carries nothing which can offend the eye and the effect while enough out of the ordinary to be noticeable, is not sufficiently striking to be objectionable.

equipment includes a full set of lamps, to gether with generator, horn, and full supply of tools. The weight of the complete vehicle is only 1,400 pounds, which, considering the ratio of weight to power, should provide rapid acceleration.

To Avoid Vise Marks on Body Work.

Those who have had difficulty in holding the pieces tight in a vise without leaving vise marks, which are ineffaceable on finished work, should have two pieces of harness leather cut to the size of the vise and bent over it, so as to rest against the vise jaws and to hold in position. The leather will prevent the jaws from cutting into the wood or iron, and will hold the pieces sufficiently tight to finish them. For heavier work, where it is required to apply more pressure in order to obtain a better grip, the common soft brass or lead jaws are more suitable.

Shrinkage of Wood When Dried.

Interesting experiments on the shrinkage of wood due to the loss of moisture have recently been completed by the United States Forest Service at its timber testing station at Yale University. These experiments show that green wood does not shrink at all in drying until the amount of moisture in its has been reduced to about one-third of the dry weight of the wood. From this point on to the absolutely dry condition, the shrinkage in the area of cross-section of the wood is directly proportional to the amount of moisture removed.

The shrinkage of wood in a direction parallel to the grain is very small; so small in comparison with the shrinkage at right angles to the grain, that in computing the total shrinkage in volume, the longitudinal shrinkage may be neglected entirely.

The volumetric shrinkage varies with different woods, being about 26 per cent. of the dry volume for the species of eucalyptus known as blue gum, and only about 7 per cent. for red cedar. For hickory, the shrinkage is about 20 per cent. of the dry volume, and for long leaf pine about 15 per cent.

In the usual air dry condition, from 12 to 15 per cent, of moisture still remain in the wood, so that the shrinkage from the green condition to the air dry condition is only a trifle over half of that from the green to the absolutely dry state.

Lessening Wear on Braking Surfaces.

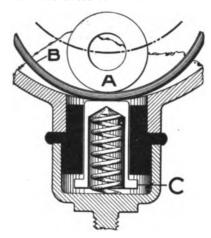
Though most drivers complain loudly of the rapid wear of braking surfaces, comparatively few of them make it a practice to clean off the drums after coming in from a run over muddy roads and after the machine has been taken from the wash rack. The drums, no matter how well protected by cover plates are bound to accumulate a greater or less amount of plain unalloyed mud under such circumstances, and the result goes a great deal further in accounting for rapid deterioration of the metal than any legitimate wear can do. It is a simple matter to flush out the brakes when mud and water have been abundant and to pour in a few drops of oil which will prevent rust and counteract any tendency to grinding when the car is first started.

Wico "Ring and Roller" Timer.

In the design of commutators it is the constant aim of the maker to do away with the effects of wear as far as possible. The plain roller contact was thought to be a great step in the right direction, if not the final thing, but in adding to the roller a loose ring through which the contact is made, the development of the new Wico "ring and roller" timer has been carried a step further in the same direction. The ring and roller timer is the latest development of the Witherbee Ignitor Co., 541 West Forty-second street, New York City. In a general way it follows the principle of the ordinary roller timer, but its action is con-

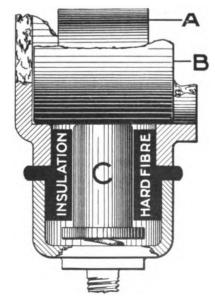
THE MOTOR WORLD

siderably modified, and the purpose of the roller entirely changed by the adoption of the ring, which rolls around the inside of the timer casing under the influence of the roller and constantly presents a changing point of action to the current at the contact points. The effect of mechanical and elec-



trical wear are thus materially reduced and the life of the device is prolonged.

The diameter of the ring, B, as illustrated in the accompanying picture, is greater than that of the orbit of the roller, A, so that a slight planetary action is set up, and in consequence, the points of contact on the ring are constantly changing. The insulated pole comprises a tool steel plug, held toward the inside of the casing by a brass spring and retained by a shoulder in such a position that its point just projects beyond the surface of the casing and in the path of the traveling ring. As the ring approaches, the contact plug is depressed and contact is made between it and the casing on both sides, a large area of contact and



a firm union of the parts thus being assured. The rolling action, distributes the arcing tendency at the instant of break, and prevents burning either of ring or point. The ring, which is the only part susceptible to wear in any degree, may be replaced readily and at small cost.

Causes of "Bubbles" in Varnish.

Bubbles which occasionally appear after the varnish has been applied to bodies five or six hours are in reality not bubbles at all, but represent a seedy or specky or sandy condition of the varnish, due to a number of causes enumerated as follows: Imperfectly cleaned surfaces, or surfaces varnished over when located in a damp or cold room, or when colder than the varnish itself. Using a varnish that through exposure to the air for any unreasonable period of time has skinned over, particles of the skin having become mixed with the varnish; also using an unripe varnish, that is, a varnish that has been unloaded on the consumer before it has sufficiently "aged" in the maturing vats of the manufacturer. Again, using a varnish that had been chilled during shipment, thus causing the driers to separate from the other ingredients. A lousy or dirty varnish brush will develop the "bubbly" or specky surface.

Defective systems of manufacture, by virtue of which particles of the gum separate on cooling, and for a long time remain suspended in the varnish, are even in these advanced days the head and front of the specky varnish.

Exposure of the varnish to the air will occasionally cause the sanded appearance often mistaken for minute bubbles, and it develops through the operation of a chemical law. High-grade varnishes, as experiments have shown, absorb moisture easily through exposure to a damp or moist air, during application to the surface, or preceding application, and this moisture chemists have long since explained forms with the turpentine a crystalline hydrate, which separates in small grains, having upon superficial examination the precise appearance of bubbles, but which upon thorough inspection, under a glass if necessary, will be found to be crystals of matter. Some one of the above causes is at the root oi the trouble described by many owners of new cars, though the particular cause cannot always be easily cited off hand.

Rambler Record of Full Time Work.

There is one factory in the industry that has not felt the depression of this or any other year—the Rambler factory in Kenosha, Wis. Thomas B. Jeffery & Co. report that it has never missed a full working day in its eight years' existence, which in these times is a boast to be proud of.

Thomas Books Taxicab Orders.

The E. R. Thomas Motor Co. report having booked an order for 50 taxicabs each from New York and Chicago parties. An order for 100 cabs from a New York company in process of formation is in prospect.

"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

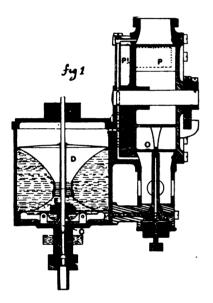


DEVELOPING THE CARBURETTER

New Foreign Types Embodying Some Original Features—Compensating Devices

Show Most Originality of Idea.

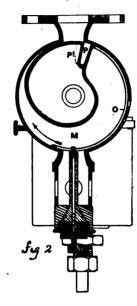
After all the peculiarities of the internal combustion engine have been considered severally and in detail, the fact remains beyond question that none of them furnish more food for thought or perplex the designer more deeply than does the problem of carburetter those who prefer originars are fairly quiescent in this respect, many builders relying on commercial types of carburetter and those who prefer original designs sticking pretty closely to types already well known. This is not the case with foreign constructors, however, the last



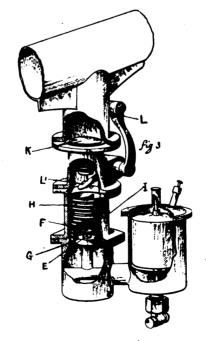
few months having developed an astonishing amount of new thought in this field, and an equal amount of new material in the way of types, described in the local prints. Some idea of the wide range of development possible with the jet type alone, wherein the sole claim for originality must lie with the compensating device, may be obtained from a cursory glance at a number of these carburetter novelties of the more authentic and plausible sort.

One such, in which a commendable idea is found in the arrangement of the timehonored float system, is the new Gillett-Lehmann, an English device, shown in Figs. 1 and 2, wherein it will be observed that in place of the usual cylindrical float a conoidal section has been chosen, the upper portion, D, serving for purposes of floatation, while the lower section, E, actuates the weights of the needle-valve system controling the valve. C. The float chamber is made of unusually large capacity for the pur pose of supplying enough fuel for some little running in the event of the main supply being cut off. In this way where gravity feed is employed, steep hills of considerable length may be climbed without danger of starving the carburetter.

The object in adopting the conoidal section for the float is to increase its sensitiveness beyond what is possible with the cylin-



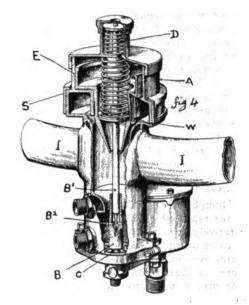
drical form. It will be evident that as soon as the fuel level in the chamber begins to fall, a relatively large portion of the float will be uncovered, the decrease inbouyancy accelerating rapidly as the level falls so that the opening of the valve must be almost instantaneous upon the slightest diminution in the quantity of fuel in the chamber. Per contra, the valve must be closed with equal suddenness when the fuel level reaches its normal at the top of the float. The inverted conoidal shape of the



base portion of the float gives it a dashpot effect.

The second illustration shows the mixing chamber and throttle, the latter, which is snail shaped, having been used on a previous type by the same makers. Among its particular virtues may be mentioned the fact that the wall, C, containing the air port through which the atmospheric component of the gas is admitted around the jet, M, is so contrived that when the throttle is fully opened the air supply may be practically cut off. This position, of course, is used only for starting. Furthermore, when the throttle is quite closed, a port, P, comes into registry with a second port P1, in the casing, thus admitting pure air to the cylinders when the car is coasting or the engine is being used as a brake.

Another British device, which though not strictly new, yet possesses rather novel features both in its throttle and regulator valves, is the Chenard-Walcker. Here the float chamber and its contents, as well as the jet with its cone-shaped and ridged baffle plate, E and F, Fig. 3, are of familiar form. The air supply is drawn upward



through the annular opening, G, around the jet, the complete mixture rising thence into the hollow, corrugated, piston, H, which carries the slender needle valve, I, thereby regulating the gasolene constituent of the gas. An in-turned annular flange at the base of the piston forms a throttle upon the air and also causes the part to be elevated as the draught through it increases Thus the movement of the piston effects the complete regulation of the gas as to quality. Quantity regulation rests entirely in the poppet throttle valve, K, which is normally held to its seat by means of the stout helical spring, K1, and may be lifted by means of the lever, L-L1, when desired. As the valve opens, the draught in the tube below is increased, and the piston raised proportionately, thus compensating for the higher running speed condition. The lever L is under foot control and is constantly used in running the engine. Two small holes in the face of the valve, however, permit starting and slow light load running without unseating the throttle.

Another ingenius method of double compensation is found in the new Westing-

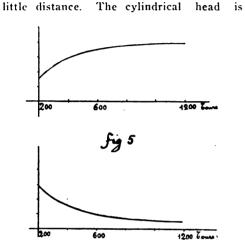


house carburetter, shown in Fig. 4. In this, the more ordinary method is adhered to, of admitting the main air supply from below and the diluent, used for compensating the gas at high speeds, from above. The jet, B, has horizontal orifices, B2, opening directly into the mixing chamber, into which the principal air supply is directly admitted from beneath by the holes, C. The auxiliary air valve, E, is located at the top in

the annular chamber, A, and is of stepped

construction, terminating below in a conical

portion which extends downward for some



lifted by the pressure of the outer air as the speed of the motor increases and the interior of the carburetter experiences a partial vacuum, thereby permitting air to enter through a series of ports surrounding the chamber, S, whence it passes downward by the conical portion of the air valve toward the jet. The opening of the valve enlarges the annular opening between its lower portion and the walls of the regulating chamber also lifting the needle valve, B1, and admitting more fuel to the jet. The extra air passing downward, meets the upward flow from the main orifices in the base creating a sharp swirling action about the jet openings, and is finally delivered to the manifold pipes. I-I, through an annular passage surrounding the regulating chamber, wherein is located the throttle sleeve. The movement of the main valve is resisted by the main spring, W, while a second and lighter spring, D, mounted in a compartment at the top of the carburetter, opposes it somewhat and steadies the movement of the valve.

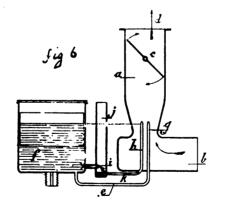
The most unique of these examples, however, is that developed by a French inventor. M. Baverey, in the Zénith. As in all other instances, the object has been to "furnish a uniform mixture regardless of speed and load conditions in the motor." If the quality of the gas be represented by a diagram in which motor speeds are measured on the base and the relative quality of the gas, vertically, evidently the perfect carburetter would be characterized by a straight horizontal line. The characteristic of the plain jet type, is shown roughly in Fig. 5, in the upper portion of which

THE MOTOR WORLD

the natural tendency to enrich the mixture as the speed increases, is clearly brought out. In theory, the compensation required to produce the desired straight line, must take the form of the lower of the two curves, which is so drawn that if superposed upon the other the compound of the two curves would be a horizontal line.

In the Zénith carburetter, an effort has been made to compensate the mixture by annexing to the plain jet carburetter a second and supplementary one the characteristic of which shall follow the line of the lower curve in Fig. 5. The method of construction is shown diagramatically in Fig. 6, in which the regular float system, f, the main jet, g, the air intake, b, and the throttle in the upper part of the mixing chamber, a, are perfectly regular. A supplementary chamber, j, into which fuel is admitted freely through the regulated opening. i, is open above to the atmosphere, and below through, k, to the second jet, h. Under ordinary circumstances, it is evident that the fuel flowing from the float chamber will find its level in the chamber, i. but that owing to the free access to its surface of the air, as well as to the reduced length of the tube leading to its jet, its delivery must be considerably greater than that of the main orifice, when the motor is first started, or is running very slowly.

As the motor speed increases, the delivery from the second jet soon becomes so rapid as to exhaust the supply in the secondary chamber, j, so that only as much fuel can flow from the jet, h, as may pass the small regulated opening, i, in the wall of the float chamber. The delivery from the main jet, on the other hand, is accelerated with the increasing suction at high speeds, so that the tendency is to equalize the quality of

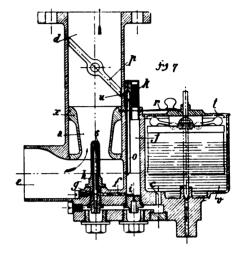


the mixture throughout the entire range of speed.

In Fig. 7, the device is shown in working detail. The main and supplementary jets are made concentric, the secondary element being the outer. Eliminating this, the carburetter will be found to be of elementary type, but minus any extra air valve connecting with the mixing chamber. The small port, i, admits a small and predetermined amount of fuel to the vertical chamber, j, which is open to the atmosphere from above, but protected from dust by a screen

k. The fine bore, f, leads the supplementary fuel to the outer tube, s, surrounding the main jet, h, and the general action is ordinarily as indicated in the scheme just outlined. A small tube, o, however, leads from a point part way up the secondary chamber. j, to a point in the intake pipe, u, where it communicates with the interior of the latter when the throttle is open, but is cut off when the throttle is closed.

This device serves a two-fold purpose. When the motor is at rest, the chamber, j.



fills with fuel to the same level as the float chamber, so that the bottom of the tube, o, is submerged. When the motor is started, the suction in the small tube, o, becomes very strong; so strong, in fact, that a small quantity of fuel is injected directly into the mixing chamber at the throttle, instead of being carried around through the jets, the effect being that starting is made possible without flooding in the usual way. Similarly, when the motor is turning so slowly that an insufficient quantity of fuel is lifted from the jets to form a suitable mixture, the level in the supplementary chamber becomes high enough to allow a small quantity of fuel to be drawn through the tube, o, thus priming the intake. The flat spring, r. serves the double purpose of clamping in place the cover, t. of the float chamber and locking the Venturi cone, x, in position in the mixing chamber, a.

Leaks in Flanged Connections.

One of the most fruitful causes of leak age in flanged pipe connection arises from the careless habit of many mechanics of drawing up the bolts unequally when as sembling the motor. It is a simple matter to gauge the tension of the nuts closely enough for all practical purposes by observing the movement of the wrench and giving the same number of turns to all the nuts. At the same time, careless manipulators if unwatched, will frequently set down one nut as far as it will go, drawing up the others in the same way afterward, thus skewing the coupling and straining the flanges far beyond their natural capacity without a tight joint.



FRAMING NEW LAW FOR NEW YORK

Proposed Provisions for New Enactment in the Line of Uniform Legislation—Graduated License Fees a Feature.

Although it appears to have escaped public notice at the time, action was taken last week by the Board of Aldermen of New York City on a portion of the Mayor's recommendations in regard to the use and abuse of automobiles in the city. The most radical and alarming provision called forth in this connection is that requiring all motor vehicles to come to a full stop before crossing an intersecting street or avenue on which a surface railroad is operated. In the matter of automobiles used for purposes of hire, whether the so-called sight-seeing vehicles, or cars of smaller capacity, a schedule of licenses is established, covering both the vehicle and its driver, while the provisions affecting cabs and carriages used for hire in the city are made to apply to motor vehicles so used. This action was taken at a meeting of the board on Tuesday, 14th inst., when the regular annual revision of the city ordinances was brought to a conclusion, and the necessary action was taken to make the work effective.

No record appears of any action upon the Mayor's recommendation in regard to the use of siren horns in the city, or to the use of muffler cutouts, the emission of smoke from exhausts, or the curtailing of the use of acetylene headlights within city limits. The licensing provisions, however, are complete and specific.

The clause affecting the control of cars at the intersection of streets on which street railway lines are laid, comprises merely a single sentence tacked onto section 555, Article 7, Chapter 13, of the "Rules of the Road." The body of the section relates to the requirements of stopping on signal from the drivers of restive horses or other domestic animals. The addition says that "Every automobile or motor vehicle shall come to a full stop before crossing an intersecting street or avenue on which a street surface railroad is operated." It will be observed that the requirement contains no stipulation as to the presence of cars on the tracks at the time.

The ordinance affecting the use of motor vehicles as public conveyances appears as a separate section of Chapter 8, under Article 3, relating to special regulations and rates. The text of Section 373 entire, is as follows:

"The Mayor of the City of New York shall, from time to time, issue licenses, under his hand and seal, to so many and such persons as he shall think proper, to keep for hire in the said City, automobile coaches, carriages and cabs, not seating more than four passengers, excluding the driver or chauffeur, in all, designed for propulsion

by electricity, gasolene, or similar motive power, and may revoke any and all of said licenses for cause.

"The provisions and penalties of the ordinances of said City of New York relating to the licensing of hackney coaches or cabs, and of drivers thereof, and to rates and prices of fares, so far as the same may be consistent, shall apply to coaches, carriages and cabs to be licensed hereunder, and to the owners and drivers thereof.

"Every such automobile coach, carriage or cab shall be equipped with a bell or horn, to be used to signal its approach to pedestrians and to other vehicles.

Section 374, controlling the operation of motor vehicles of greater seating capacity than the above, reads as follows:

"No automobile carrying more than four passengers for hire, including sight-seeing automobiles and power vehicles of every description, shall take up or carry any person for hire, unless duly licensed so to do. The fee for such license shall be estimated on the basis of the seating capacity of such automobile, as provided in Section 351 of these ordinances. The Mayor shall also issue an annual license to the driver or chauffeur of any such automobile, the amount of which shall be one-quarter of the license fee for such automobile; but in no event shall the amount paid for such chauffeur's license be less than \$10 annually."

Under the section governing the granting and regulation of licenses the word "chauffeurs" has been inserted, while the subsequent clause fixing the amounts of licenses for vehicles plying for hire, it is provided that "For each public automobile having more than four seats for passengers, for each seat thereon," the annual annual license fee shall be \$1. For each public hack or automobile hack having not more than four seats for passengers, the license fee is \$3 per year.

Buffalo Plans Exorbitant License Fees.

Having been defeated in its efforts to tax all motor vehicles Buffalo, which evidently needs the money pretty badly, has determined to mulct those who operate and maintain motor vehicles for public hire. By the ordinance drafted by the city attorney for approval by the Board of Aldermen a sliding scale of taxation is outlined that will doubtless not be received with any manifestations of great joy. If passed by the city fathers a sight-seeing car carrying 30 passengers will be "squeezed" for the small sum of \$450 yearly, while a touring car carrying eight passengers or less will be required to pay \$35 for a license; touring cars carrying more than eight passengers will have to pay \$15 a head. "Barkers" or touring car solicitors will be compelled to give up \$25 each yearly. The tax on publie freight transporting motor vehicles is fixed at \$25 each. It readily can be seen that the shakedown, if approved by the Aldermanic Board, will yield a very large revenue.

MUST STOP AT TRACK CROSSING

Remarkable Requirement Quietly Enacted by the New York Aldermen—Other New Provisions in the Ordinance.

In the general effort being made for uniform automobile laws, New York automobilists will not be last in attempting to secure that legislation which they deem best suited to their needs. Charles Thaddeus Terry told a Motor World man this week that he expected to have his uniform automobile bill drafted within a few days and that it will be introduced in the New York State legislature as soon as possible, probably next week. It first will be referred to the special committee on legislation of the New York State Automobile Association, of which Mr. Terry is chairman, after which it will be sent to the legislature.

While its provisions have not been made public as yet one of the features will be a sliding scale of taxation based upon the weight and character of the vehicle, and it is thought that an effort will be made to have all the money thus derived apply directly to the building and maintenance of State roads. According to report it is proposed to divide cars into four classes—light runabouts, light touring cars, medium touring cars and heavy vehicles. The fees will be \$2, \$3, \$4 and \$5, respectively.

While this bill is being put into shape for introduction the law makers, pursuing their annual custom, are busy. Already three bills have been introduced. The first of these was presented by Assemblyman Frederick Northrup of Poughkeepsie. Mr. Northrup introduces the same bill with annual regularity and it as persistently "dies" in committee. The representative from Dutchess county would tax all automobiles \$5 a year to be devoted to the repair of the highways.

Patrick J. McGrath of New York, being a new assemblyman, sought to make a fashionable debut, by introducing a bill to compel automobilists to stop and give their names and addresses and the name and address of the owner of the car when a person or property is injured.

The latest effort in this direction was made on Tuesday by Senator John N. Cordts, of Kingston. The upstate legislator wants "automobiles fitted with automatic lamps that will throw the light straight ahead and thus do away with the full light that goes in all directions and blinds people as the cars approach."

Despite the "well-meant" efforts of these legislators it is likely their bills will die the usual death when the uniform bill, being drafted by Mr. Terry, is introduced. That, too, may meet the same fate, but it is not thought likely as there will be no radical departures to cause objection, it is stated.

PEELING OF PAINT IN WINTER

Causes of a Frequent Evil that Mars the Appearance of a Car—Some Ways of Obviating It.

The peeling of paint from springs, axle beds and other metal parts of carriage gears has furnished the painter at one time or another with days running over with trouble, but the larger share of this trouble, if seasons could be specified in detail, has come, we take it, during the cold months of the year, and, to be more definite, during the coldest days of these cold months, says Carriage Monthly.

It is known, naturally, that the peeling of paint occurs in the summer months, and during those yearly periods when we have every reason to expect paint to stay exactly in place, but such peeling, in the main is due to errors or neglect for which, apparently, it is hard to find a logical excuse.

The peeling of paint in the winter, however, is, in the majority of cases, we feel justified in saying, due to elements of the weather over which the painter has little, if any, control. The carriage comes into the shop (speaking now of work that has to be coated from the bare metal up), and is subject for some days to the control of the painter. In the warmth of the room the metal parts expand, possibly ever so little, and during this expansion the painting and finishing are carried forward, and in due time the vehicle goes out into the bleak, cold world to eke out its days of service. But, alas! in the moment of seeming security the entire film of paint and varnish rolls away from the surface in a great, plastic sheet, which lays bare the shining metal foundation between which and the pigment no affinity exists. The system of painting may have been of the very best and without flaw—the result, under the prevailing weather and service conditions, would be the same. It is simply a repetition of the calamity which followed the loss of the horseshoe nail. The expansion of the metal in the warmth of the shop had in the biting frost outside produced an opposite effect, namely, contraction; and to such an extent had this contraction developed that the paint structure is just naturally unseated—slid off its base, as it were. In a certain shop where this peeling difficulty has been encountered repeatedly, despite the best laid plans of careful painters, the practice was some time ago adopted of using, during the winter month, a red lead and raw linseed oil primer upon all metal parts of vehicles to be put immediately into service, since which time no case of paint peeling from the above cause has been noted. Car painters have this difficulty to contend with to a large extent during the winter, and they resort to various expedients to overcome the trouble.

THE MOTOR WORLD

The surface in some instances is primed with elastic finishing varnish, and in others with a patent transparent primer composed of resinous gums in connection with oils and other elastic materials, making an extraordinarily tenacious primer responsive alike to the law of expansion and contraction.

Some pigments, especially many of the dark, fine colors used in carriage painting, are naturally brittle, with a tendency to separate from the surface over which they are applied, and this disposition the intelligent carriage painter is ever industriously studying to counteract—to eliminate totally, in fact.

New Home of the Rainier.



The new building on the corner of Broadway and Fifty-sixth street, of which the Rainier Motor Car Co. became possessed on the first of the year, is a fitting addition to the elaborate structures that have been and are being erected on New York's "automobile row." With a frontage of 50 feet on Broadway and 136 on Fifty-sixth street, it is five stories high and with the basement, it is to be used exclusively for the Rainier cars, of which there are accommodations for at least one hundred and eighty.

As the illustration shows, the outward appearance is imposing, and inside one finds a thoroughness of detail in the appointments and equipment that proclaims the building adequate for the demands that are to be made upon its facilities. In addition to the executive offices and show rooms, the building houses the garage and repair and paint shops.

MAINTENANCE OF BODY SURFACE

Lack of Care a Chief Reason for Its Rapid Deterioration—Proper Method for Cleaning a Car.

The average American bent upon matters of research should encounter small difficulty in accounting for the lack of durability charged up to the automobile's structure of paint and varnish. It is not that the painter, so far as his craft practices are concerned, is blamable, but rather that, next to the actual user of the machine, the party charged with the care of it during its hours of inaction is responsible for the color that, unlike the beast of the jungle, changes its spots, or for the varnish that sheds its lustre prematurely.

The finished surface thrives or perishes according to the treatment tendered it, and without referring to the general hard service it is forced to undergo during its life on the highway, which in not a few respects is simply disastrous, it is in order to point out that plenty of the lack of durability complained of in respect to automobile surfaces should be charged directly, and without any misgivings, to the care taker or garage washer and cleaner.

A carriageman relates that not long since he witnessed the operations of one of these garage attendants, in his attempt to clean a touring car just in from a run about town. In the first place, he says, the chap ran the vehicle, a valuable one, into the blazing rays of the sun, and without an appreciable twinge of conscience, turned the hose, under high-water pressure, bang upon the surface. If there is anything fraught with greater injury to the varnish, and thus in a proportionate ratio, to the color and other coatings beneath the varnish, than this high pressure water bath through the deadly and convenient hose, it has not been catalogued, adds the carriage expert.

The automobile surface, on the whole, should be, and, we believe, really is, quite as capable of giving a good account of itself as the surface of the horse-hauled vehicle, but it has in most cases a greater exposure of surface, and a more destructive form of service forced upon it, so that in the natural order of things it is not capable of withstanding anything but the most considerate treatment in the course of washing and other care taking and cleaning operations. This much the painter owes it to himself to explain to the automobile owner or party in charge. The automobile should be washed, as a matter of fact, just as the horse-drawn vehicle is washed-with sponge and water gently applied-and lightly dried off with a lint free chamois skin; and it should be kept clean, and given other proper care, otherwise durability will be like the letter that was long looked for, but never came.

OWNERS FAVOR A NEW HIGHWAY

Massachusetts Automobilists Declare for the Pittsfield-Springfield State Road— Work of Owners' Association.

Voting in favor of the plan for building a State highway connecting Pittsfield and Springfield was one of the most important actions of the Automobile Owners' Association, at its annual meeting, held in Boston, on Wednesday, 15th inst. The association, according to the annual report of President Tudor, now has nearly 1,000 members.

Among the things it has done during the year was the purchase of a number of signs to mark dangerous crossings or curves in the highways, all of which have been distributed free to cities and towns requesting them. Considerable aid has been given the authorities in checking reckless driving. Among other things, President Tudor said:

"The association has protested a number of restricted speed and exclusion regulations which were adopted by cities and towns, in order to keep intact a uniform automobile law throughout the commonwealth, and has successfully maintained its protests in many instances.

"During the past year 1,026 convictions have been reported to the highway commissioners. The number of arrests is the greatest in the history of the State. Out of several hundred arrests of members during the past year with which counsel for the association has had to deal, more than two-thirds of the persons concerned in these complaints have been acquitted of the offenses charged, or their cases have been nol prossed or filed in the inferior or superior courts."

The following officers were elected: President, Frederic Tudor; treasurer, John M. Graham; secretary and counsel, Francis Hurtubis, Jr. In addition to the old board of directors the following were elected: George D. Clapp, Boston; A. B Cobb, Newton; Henry N. Richards, Boston; W. A. Underwood, Cohasset; C. M. Bryant, Quincy; H. B. Stowell, Brookline; Lewis R. Speare, Newton Centre; George Tyson, Boston.

Course for the Briarcliff Trophy Race.

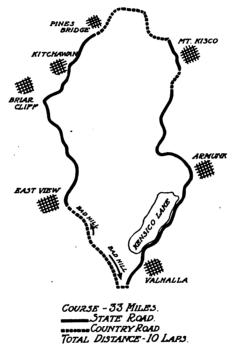
C. F. Redden, manager of the Stude-baker's automobile branch in New York, who last week drove over the route of the Briarcliff trophy race in Westchester county, New York, is of opinion that the course is a "sportier" one than the Vanderbilt circuit on Long Island.

"From East View," said Mr. Redden yesterday. I drove through Briarcliff to Kitchawan and Pines Bridge and found the roads in excellent condition for this time of year. From Pine Bridge to Mt. Kisco the roads were poor, but this seemed to

be due largely to the season. During the Spring, and after the roads are settled these are good county roads.

"The roads are exceptionally fine from Mt. Kisco through Armunk and past the long Kensico Lake to Valhalla. The only drawback being a few bad turns. From Valhalla back to East View the course leads over a road, which although good as American country roads go, is actually hilly and will test not only the endurance of the cars but the ability of their drivers.

"It is a route that is well calculated to test the skill of the drivers no less than the running qualities and speed of the cars, but if the race is to be a positive success, it is



MAP OF THE BRIARCLIFF TROPHY COURSE

absolutely essential that the course be properly policed. There are a number of cross and intersecting roads which without an efficient policing system, will make fast driving almost impossible. After going over the course carefully, I believe that a car like the 40 horsepower Studebaker, which we will enter, will have an equal chance with some of the largest racing cars. For I believe that in a 300 mile race of this kind, absolute reliability rather than excessive speed will win the race. Of course the ability to get under headway quickly, after rounding a corner, is going to be an important factor, and the long wheel base car is laboring under great disadvantages.'

While Mr. Redden terms the course "sporty." others who have been over it style it dangerous. It is treacherously narrow in places, and aside from many right angled turns, there are stretches of road which resemble the wrigglings of a serpent. At one point there are three "wriggles" in less than half a mile, with the choice of an embankment on one side, a lake on the other. The possibilities for "happenings" are immense.

"SQUEEZE 'EM AGAIN" SAYS PORT

New Jersey's New Governor Accommends
Higher License Fees—He also Urges a
Motor Vehicle Department.

Automobiles and public roads received some attention from Governor F. Franklin Fort, of New Jersey, in his inaugural address at Trenton on Tuesday, 21st inst., as was expected they would. The establishment of a separate department for the licensing and regulation of automobiles, higher license fees, based according to horsepower; an increased number of officials to see that the laws are enforced, more rigid penalties for violations thereof, are some of the recommendations of the new governor. At present his State exacts \$7 per year for large cars and \$4 for small ones.

In speaking of the demand of the public for the enforcement of the automobile laws, Governor Fort said:

"A very large percentage of the automobile drivers are careful, but there are some who are not. If the present automobile law is too stringent it should be amended. A speed of twenty miles an hour in many places is not excessive; in fact, it may be said to be quite moderate, without misstating the truth; while in other places, a speed of twelve miles an hour is more rapid than these machines should be permitted to go.

There should be sufficient officials in the department.

to see that it (the law) is enforced, and the penalty for the violation of the law should be more severe."

Governor Fort expressed himself as highly pleased with the policy of the present highway department, and suggested that more miles of "admirable highway" should be constructed,, and "maintained after they are built." He explained that when the roads were built by State aid they were constructed for light traffic, and that automobiles have injured them to great extent; for that reason he is in favor of a higher license fee, to cover the cost of repairs.

"If the license fee method is adopted," said the Governor, "then it should be graded on the basis of the horsepower of the machine operated. It would seem as if we should get from the automobile owners a revenue of about \$250,000 per year, and this entire revenue should be devoted to the repair, or the aiding in the repair of the public highways of the State, the building of which has been assisted by State aid.

"This tax need not be a heavy one upon automobiles, and the drivers of these machines are quite as anxious for the preservation of the public highways by the keeping of them in repair as the rest of the traveling public, and they will not object to a reasonable license fee, fixed upon the basis of the horsepower of the machine operated."

Oil Sediment for Road Treatment.

At the Pope-Toledo factory in Toledo, they believe they have settled the dust nuisance and pointed the way to a phase of road improvement. The plant covers a large area. At the rear of the factory buildings is a circular speedway, while be tween the buildings are driveways. These roads are subjected to very severe use from testing cars constantly passing over them, going out and returning to the factory, generally at great speed; heavy traffic of large trucks, heavily loaded touring cars, etc Naturally these drive and speedways created lots of dust and required constant repair. Much experimenting has been done, and the Pope-Toledo people say they have finally hit upon a road treatment which gives excellent results and is very economical The Pope-Toledo factory has its own steel treating furnaces, some oil heated, and in it the sediment from the crude oil used in the heaters, sprinkled with an ordinary sprinkling can, over the surface of the roads, that has improved the neighborhood of the plant. Three treatments a season, it is said, makes the roadbeds waterproof, lays the dust, and prevents ruts, breaking of embankments, etc.

Direct Drive as a Saver of Power.

Generally speaking, the direct drive is held to be of great advantage as a means of saving power, as compared with the same speed developed on a lay shaft drive which is indirect. The latest performance of the industrious Edge-Napier testing plant, however, tends to show that the gain effected in this way is not so very great after all, although in common with all similar advertising exploits, it was intended to reveal the superiority of the system. A complete test of a 30 horsepower, 6-cylinder car, showed a maximum difference of only 1 horsepower between the power at the road wheels on the direct high and the indirect second speed, with the motor running at its most profitable rate. The difference in efficiency of the transmission system for the same motor speed revealed a variation of not more than 4 per cent. The absolute gain of the direct connection thus appears to be largely nominal in so far as the power question alone is concerned.

Manual Adjustments for Service Brakes.

Several of this year's foreign cars are provided with manual adjustments for the service brakes, the arrangement being such that the driver can readily alter the tension of the brakes in a moment or two without using any tools or disconnecting any of the linkage. The advantage of this is manifestly very great. For while theoretically the brakes should always be in perfect holding condition, the fact is that at times the abrasion of the working surfaces is very great, while at others it is necessary to have the brakes so adjusted that they may be gently applied, and at still others, so tensioned that they will

THE MOTOR WORLD

lock the gear at once. On this account such an adjustment, providing handy means of altering the set up of the brakes at any time when they prove at all inefficient, is a most useful one.

Many Ways of Saying "Chauffeur."

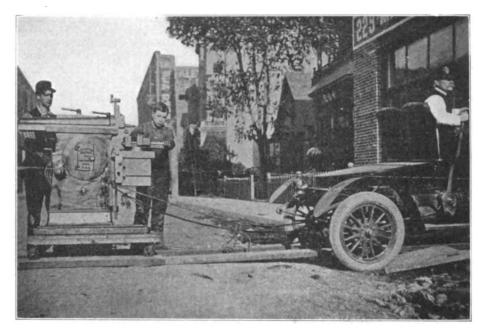
"What's the 'chofer' doing all this time?" questioned Attorney Bell of a witness in the trial of an automobile damage suit in the Indianapolis courts last week.

"Well, to be frank, I don't remember," was the reply. "I was not paying much attention to the 'chaffewer."

Several other witnesses were called, in-

Strenuous Work for an Automobile.

That the emergency uses to which the useful automobile may be put is constantly increasing is not a matter of surprise. It was a saying of that almost forgotten celebrity, Sam Patch, that "some things can be done as well as others," and this applies in large measure to the automobile in its utilitarian character, which it exemplifies in an extended list of practical service, from the delivery of family groceries to the transportation of a grand piano. Its capabilities for arduous service that would seem to be near to the limit may be seen in the accompanying illustration which aptly might be



RAMBLER ENGAGED IN HEAVY MOVING

cluding a policeman and a physician, and the same question was put to each of them. The witnesses did not all agree with the attorney in the pronunciation of the word. The patrolman in great pride called it "chaff-ore," the doctor pronounced ot "chofure," one young lady noticed the "cheefer," while still another thought it ought to be "shover." As yet the correct pronunciation of the word "chauffeur" has not been hit upon.

Women to be Club Members.

It generally is acceded that in the South the genus homo are more chivalrous toward the weaker sex than is apparent in the north. Although women will not be permitted to drive in the proposed stock car race in Westchester county, New York, they will be allowed to become active members of the Automobile Club of Maryland. the club having made this decision last week. Of course, the comparison is somewhat remote, and it is not known what the Marylanders would do if a feminine member of the club should want to compete in a race of its promotion. But, anyway, in Baltimore women don't go in for that sort of thing.

called a moving picture. The vehicle is a Rambler runabout, Model 22, owned by D. C. Wilgus, a manufacturer in Los Angeles, Cal. When recently he transferred his business to a new location he moved the entire equipment of his machine shop with this utility car. Planers, lethes and general machinery to an amount representing a value of about \$12,000 was successfully ransported, and Mr. Wilgus credits to his profit and loss account a very considerable amount saved in the item of truckage expense.

Backing up Their Assertions.

If Triumph grease, the red lubricant, does not command more than usual attention, it will not be for lack of opportunity afforded by its makers, the Perfection Grease Co., South Bend, Ind., who literally "show their faith by their works." The grease is a new compound which is claimed always to retain its sponginess, which will not melt and run away, and is therefore cleanly and economical, and which is not affected by cold weather. The makers back their assertions by offering to refund any expense to which a user of the grease may be put if it fails to substantiate their claims.



ROAD REPAIRS IN NEW JERSEY

What They Cost Last Year and What Automobiles Contributed—The Commissioner Wants More.

When the New Jersey legislature enters upon the work of amending the automobile laws it is expected to derive considerable light from the annual report of State Road Commissioner Hutchinson and a paper on road repairs accompanying it.

In this paper the commissioner expresses a desire to see established in every county of the State a system similar to the one existing in France, and which recently was described in the Motor World. He would, he says, "apportion the roads in such a manner that a man with a team can take care of his section properly by spending his entire time on the roads for at least nine months in the year. In road repairs 'a stitch in time saves nine,' and wherever there is a depression on the road, caused by a rut or otherwise, it should be remedied at once. When the counties of the State adopt this system of road repair the road repair account will be considerably less than it is at present."

In his report the commissioner says: "We have 1,235 miles on roads built under the State aid law, toward which the State has contributed \$2,283.097, an investment of which we are proud, and which is certainly well worth taking care of. In addition to this, the counties have built 800 miles without State aid, which they must also keep in repair.

"Under the automobile law, passed two years ago, we will have about \$82,000 to distribute in 1908 among the different counties as the State's contribution toward repairs. While this seems like a large sum, I feel that the license fee should be increased, because we will need for our more than two thousand miles of roads over \$600,000 to keep them in repair, allowing an average expenditure of \$300 for each mile of road. This is a low estimate of our repair account. My opinion is that the automobilists will have no objection to paying a larger part of the cost of repairs, provided the money is spent judiciously and the roads are kept in good order. My experience as an automobilist is that automobiles are of little practical use if we do not have good roads and I am personally proud, taking them as a whole, of New Jersey's improved roads, and it is my one desire that we shall keep those we already have in good repair."

The commissioner then goes into deails of every county, showing for the first time what repairs have cost the State and counties for the last year. He also tells the Governor that of new roads his department has accepted 83,332 miles, and has under contract 63.086 miles, that his department has examined and approved surveys for im-

proving 99.93 miles of roads, making a total of 245,738 miles of roads, lying in all portions of the State.

According to the road repair section of the report, there was spent in New Jersey last year for road repair \$648,488.60, of which sum the State gave from its automobile licenses and fines \$56,473.85, leaving the counties to furnish \$592,014.75 of the repair moneys.

Pawtuxet Protests Against Speed.

Pawtuxet is one of the suburbs of Providence, R. I., and it boasts of an Old Home and Improvement Society that manifests a disposition just now to take a whack at the automobile by means of the "big stick" of the State legislature. Its commit-

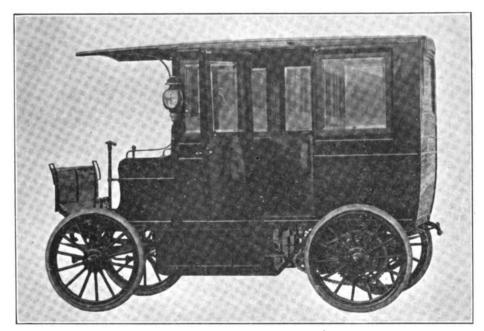
AUTOMOBILE TREASURE TRANSPORT

Specially Equipped for Bank Service in St.

Louis—Its Strong Box and How

It is Guarded.

Literally "loads of money" make up the daily cargo of a smart looking automobile that has recently been seen stopping in front of express offices and factories in St. Louis, besides making frequent trips to the sub-treasury. In appearance it resembles an elaborate limousine, as may be seen by the accompanying illustration, and its function is to carry cash and valuables to and from the National Bnk of Commerce.



BUILT TO TRANSPORT TREASURE

tee on resolutions reported at the meex ing of the society last week a set of resolutions to be transmitted to the General Assembly stating that "the Pawtuxet Old Home and Improvement Association, in regular meeting assembled, does hereby express its disapproval of the high speeding of automobiles aforesaid, and respectfully requests of the General Assembly such legislation as will further assure to the inhabitants, not only of this locality, but to the citizens of the State in general, a reliel from such jeopardy." It is stated that the resolutions may be adopted when the members are again "in regular meeting assembled"

More Massachusetts Licenses Revoked.

Two licenses were revoked last week by the Massachusetts Highway Commission, both for reckless driving. Edward W. Arnold of Abington, and George C. Gokey of Cambridge, are the drivers who must surrender their "papers," the latter being commanded to return his professional chauffeur's badge as well.

The vehicle is an electric built especially to the bank's order by the Studebaker Automobile Co., of South Bend, Ind. At times the car transports over 9,000 pounds of money during the course of a day. Factories that are customers of the bank and that wish to pay off in currency, have the money sent to their places of business by means of the machine, and establishments receiving great quantities of currency during the course of the day and wishing to deposit it, send for the wagon. Inside the body is a heavy steel strong box, having five compartments and fitted with forbidding locks. At the rear, and facing the box, is a broad seat for the person in charge and the officer or guard. The vehicle is built upon a regular Studebaker electric chassis of 1,500 pounds capacity, and with a 1,000 pound load in addition to the body, has a radius of forty miles at a speed of twelve miles an hour.

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau St., New York City.



Proposed "Pounds" for Automobiles.

Almost every city, town and village in America has its dog pound, where stray and homeless canines are impounded until claimed by owners or disposed of by the authorities, and now New York City shortly may have its "automobile pound" to meet the same requirements. Last year the street cleaning authorities displayed unwonted vigor in keeping the streets clean and their crusade reached such high proportions that they could not see the dirt close to the streets but automobiles towering above them. They gathered a number of cars that had been left standing in front of office buildings or residences while the owners of the cars were attending to business or making social calls. Naturally there was a great deal of unfavorable comment from the owners, but the department officials were firm, and insisted upon keeping the streets clear of obstructions of the sort.

General Superintendent William Robbins of the Street Cleaning Department of New York City is nothing if not polite, and knows how to encase his iron hand in a velvet glove. That he means to start another crusade against the practice of leaving unguarded automobiles in the street, is evidenced in the following letter sent out to the district superintendents:

"By direction of the commissioner, you will call on the managers of the garages in your respective districts and present his compliments, taking advantage of the occasion to inform them that this department is obliged by law to keep the streets of this city clean of all obstructions, and that they will greatly aid him in this duty by not permitting their automobiles to stand in the street in front of their places. Their doing so will be at their own risk, for the law compels their seizure by the officers of this department."

Automobile Truck for Hauling Fruit.

That the automobile will prove a blessing to growers and packers and will be the means of great saving in cost of transportation of the fruit is the belief of the Penn Fruit Company of Riverside, Cal., which has followed up its opinion by the purchase of a big truck to haul oranges from the groves to the packing houses. It is the first truck to be used in California for this purpose, and other growers will watch the experiment with interest. The new "orange truck" has a capacity of five tons and can haul 200 boxes of fruit, while a trailer can be attached to hold 100 boxes more. Hauling 300 boxes of fruit at one time will do away with four teams, while the decrease in maintenance and saving in time is expected to amount to considerable.

Western Cities Try Automobiles Patrols.

Indianapolis and Chicago have followed the lead of New York in experimenting with automobile patrol wagons. The Indianapolis "Black Maria" went into commission last week, while the Windy City's "drunk wagon" as it is called, will be given its initial tryout this week. There was keen competition in providing the patrol wagon in Indianapolis as there are two factories right "in its midst," and each wanted the honor of placing the machine. It finally was awarded to the company that bid \$1,500 and it is said that it cost more than \$2,500 to build the car.

Wily Turk's Scheme Went Wrong.

Turkish methods of applied substitution did not meet favor with Parisian police in the case of Vahinakin Ladar, a Turkish merchant of Paris, who was sentenced to two days' imprisonment for exceeding the regulation automobile speed laws. Ladar determined to apply the Turkish method and paid a fellow countryman to go to prison instead of himself, but it was not long before the substitution was discovered. On Monday last when he thought all danger had passed the ingenious Turk was rearrested and will have to serve the sentence. His accomplice will be tried for forgery as he falsely signed the prison register.

Governor Fort to be Club's Guest.

Governor John Franklin Fort will be the guest of honor at the annual banquet of the New Jersey Automobile and Motor Club, to be held in Newark, Thursday night, February 6th. The entertainment committee received the Governor's acceptance late last week. William H. Hotchkiss and F. H. Elliott, president and secretary, respectively, of the American Automobile Association, and Charles Thaddeus Terry, chairman of the legislative committee of the National Association of Automobile Manufacturers', also have promised to eat, drink and be merry with the Jersey motorists.

Quaker City Club's Nominations.

Nominations for officers to be elected at the annual meeting on February 6th, have been made by the Quaker City Motor Club, of Philadelphia, as follows: For President, P. D. Folwell; first vice-president, A. T. James; second vice-president, L. D. Berger, treasurer, A. T. Stewart; secretary, H. C. Harbash and I. C. Minford; board of governors, R. D. Bartlett, C. J. Swain, E. C. Johnson, G. Hilton Gantert, E. C. Lewis, E. H. Fitch, F. E. Church,, Dr. J. H. Overpeck, A. E. Maltby, E. C. Leeds, Frank Hardart, M. E. Brigham, F. C. Vanderhoof, E. F. Paist, L. E. French, N. Petry, Daniel-Webster and George N. Graham.

Schultz Heads Staten Islanders.

Charles A. Schultz was elected president of the Richmond County Automobile Club of St. George, N. Y., at the annual meeting last week. Other officers chosen were: Vice-president, O. W. Sprigg; secretary, J. J. Worrell; trustee for three years, Dr. J. W. Musgrove.

Chauffeur's Definition of a "Gump."

A "gump" is a man "who has an ever abiding weakness for posing as the owner of his employer's car after the shades of night have fallen and the said employer is enjoying more or less peaceful slumber."

This, at least, is the definition given by President Johns at the stag party of the recently organized Illinois Chauffeurs' Association, at Chicago last Thursday night, 16th inst. More than 100 chauffeurs and several invited dealers were present and President Johns defined the "gump," while taking a fling at the chauffeur who posed as the owner of his employer's car.

The association, the president explained, is not a labor union and will not have anything to do with the differences that arise between employer and employee, except to discipline any member found guilty of "'railroading,' drunkenness, or dishonesty." Several local dealers who were present addressed the chauffeurs and wished the organization a successful and uplifting career.

Colored Porter's Joyless Joy Ride.

A man once hired a negro to clear off a small piece of stubble land for him, the remuneration agreed upon being one dollar per day. The next day, the employer, chancing to go past the place, saw two negroes in the field, one laboriously sweating at the end of a grubbing pick, while the other sat upon the fence and swore vociferously at the other.

"How's this," said the employer, addressing the negro upon the fence, "didn't I hire you to do this work? Who is this other fellow"?

"Well, you see, boss, it's lak dis: I hired him to do de work at a dollar a day."

"But that's all I said I'd give you. How do you make anything"?

"Well, boss, dat's a fac', but I has the fun o' bossin' him."

All this anecdotal prelude has nothing to do with the case in point, but it explains the desire in "darkies" to appear "big" before their friends, and why the Rainier branch at Chicago is without a demonstrating car. Manager A. M. Robbins didn't know that the colored porter he recently engaged had any ability as a driver and so had not given George carte blanche use of the cars in the garage. It may have been this fact that prompted George to give his colored friends an exhibition of his skill while Manager Robbins was asleep. A telegraph pole inconveniently stood in the way and it will cost \$1,500 to repair the car. George has not been seen since the accident, so the police are looking for him.

Santa Barbara Club Elects Duncan.

At its annual meeting the Automobile Club of Santa Barbara, Cal., elected Titus Duncan president; W. L. Newton, vice-president; G. W. Bates, secretary, and John Marshall, treasurer.



The Week's Patents.

868,737. Spark Plug. Frank J. Watt, Detroit, Mich., assignor of one-half to Roy E. Hardy, New York, N. Y. Filed March 28, 1904. Serial No. 200.323.

1. In a spark plug, the combination of an externally screw threaded bushing provided with a central bore reduced in diameter near its upper end to form a shoulder, an insulating plug of a diameter to pass partially through the reduced portion of the bore and formed with a shoulder intermediate its ends to oppose the shoulder on the bushing and with an axial bore of uniform diameter throughout its length, a packing ring interposed between the shoulders on the plug and bushing, a binding bolt forming an electrode extending axially throughout the bore of the plug, a head on the inner end of said bolt to engage the inner end of the plug, a sparking point secured to said head and extending laterally therefrom toward and within the inner face of the wall of the bushing, a nut on the bolt engaging the opposite end of the plug, an insulating cap having an opening for the passage of the bolt inclosing the outer end of the plug and seated upon the end of the bushing, a packing ring interposed between the cap and bushing, a washer bent to form a spring sleeved on the bolt in engagement with the cap, and a nut and binding nut to engage said washer and clamp the parts together.

868,786. Driving Appliance for Speed Meters. Ragnor Johnson, Worcester, Mass. Filed Nov. 9, 1906. Serial No. 342,-751

1. In a driving appliance for speed meters, the combination with the toothed crown wheel, of an outer flange applied in connection therewith, an encircling band, an inner flange applied in connection with the crown wheel and perforated, screws passing through said inner flange and into the spokes of the vehicle wheel, and bearing blocks through which the screws pass, said blocks being interposed between the flange of the crown wheel and the spokes, substantially as shown.

868,797. Transmission Mechanism. Geo. D. Munsing, New York, N. Y. Filed April 23, 1907. Serial No. 369,787.

1. The combination with two shafts and a gear wheel on each of them, of planet gearing between the gear wheels, a clutch member movable in unison with the planet gearing, a co-operating clutch member and means to frictionally lock the parts of the mechanism against relative rotation.

868,806. Electric Motor. Oscar H. Pieper and Alphonse F. Pieper, Rochester, N. Y. Filed Nov. 25, 1905. Serial No. 289,140.

1. In a controlling device for an electric motor, the combination with an armature shaft and contact plates mounted thereon, of a movable contact member normally connecting said plates, a tension device attached to said member and movable in a direction transversely of the armature shaft, and a member movable longitudinally of the shaft and co-operating with the tension device, means for operating it and a motor circuit leading to the contact plates.

868,834. Explosive Engine. William K. Bassford, Perth Amboy, N. J., assignor to Vapor Gas Engine Manufacturing Company, Perth Amboy, N. J., a Corporation of New Jersey. Filed Jan. 22, 1906. Serial No. 297,339.

1. In a gas engine, the combination with a cylinder, a supply and exhaust, of means

for heating the supply by the exhaust, and automatic means controlled by the temperature of the supply adjacent the point of its admission to the engine for governing the heat of the supply.

868,839. Hydrocarbon Engine. Jan Brons and Nanno Timmer, near Delfzyl, Netherlands. Filed July 1, 1904. Serial No. 214,927.

1. In a four stroke cycle hydrocarbon engine, the combination with a spring-pressed inlet valve for liquid combustible, of a shallow box beneath and surrounding said spring pressed inlet valve within the cylinder and provided along its periphery with a plurality of holes at a small height above its bottom, it being adapted to contain up to its holes the quantity of liquid combustible required for a cycle.

868,851. Machine for Propelling Plows or Other Agricultural Implements. Emil Erixon, New York, N. Y. Filed Nov. 19, 1906. Serial No. 344,168.

1. A machine of the character described comprising a frame, a motor, a chain operated by said motor and provided with rollers arranged to bear upon said frame, and a plurality of foot pieces carried by said chain, said foot pieces being connected to said chain in such manner as to permit independent movement of said pieces relative to the chain.

868,907. Automobile Locking Mechanism. John F. Coltman, Chicago, Ill. Filed Sept. 22, 1906. Serial No. 335,709.

1. The combination, with a lever, a lever guide, a lock casing secured to the guide so as to have its face flush with the side of the guide, a spring actuated bolt mounted in said casing and arranged to move transversely of the plane of movement of the lever, said lever having an opening therethrough to receive the bolt and a plate arranged opposite the lock and at a distance therefrom equal to the thickness of the

868,935. Speed Changing Mechanism. George D. Munsing, New York, N. Y. Filed May 23, 1907. Serial No. 375,324.

1. In a speed changing mechanism, the combination with driving and driven shafts; of gearing between the two shafts, a cylinder, and a rotary piston therein to control the rotation of the gearing.

868,939. Pneumatic Pump. Hadley C. Reames, Los Angeles, Cal., assignor of one-half to George H. Reames, Los Angeles, Cal. Filed Sept. 20, 1906. Serial No. 335, 340.

1. A pneumatic pumping mechanism for a vehicle tire, comprising a cylinder rigidly secured to the rim of the vehicle wheel; an air inlet valve operatively mounted in the outer end of said cylinder and in communication with the tire on said wheel; a piston in said cylinder provided with a piston rod; means attached to the frame of said vehicle adapted to reciprocate said piston rod upon the rotation of the vehicle wheel; an auxiliary cylinder secured to said first named cylinder having an open port in communication with the tire on said wheel; a spring pressed piston in said auxiliary cylinder adapted to be moved inwardly against the spring pressure by the air pressure in said tire; and a spring catch mounted in said auxiliary cylinder adapted to be pressed into the first named cylinder by the inward movement of the piston in said auxiliary cylinder.

869,021. Internal Combustion Engine.

Odin Roberts, Dedham, Mass. Filed Sept. 9, 1905. Serial No. 277,676.

1. In an internal combustion engine, an assemblage of opposed cylinders with balanced parts, means to eliminate from operation successive balanced portions of the assemblage cumulatively leaving the active residue in balance, and means to vary the operation of said alternating devices to change the location of the active residue in the assemblage.

869,025. Metal Vehicle Body. Hinsdale Smith and Arthur P. Smith, Springfield, Mass. Filed April 2, 1907. Serial No. 365,-902.

1. In a vehicle body, the seat portion of the same having a bead formed therein, a bow-piece secured to the body portion and at the rear side of the seat portion of the body; said bow-piece being of different material than the body portion whereby the unholstering material can be readily attached thereto.

869,058. Speed Changing Device. John G. Callan, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 6, 1904. Serial No. 211,-243.

1. In combination, a shaft, a support, a member secured to said support and angularly adjustable with respect thereto about said shaft as a center, a rotating member carried by the first mentioned member and eccentrically mounted with respect to said shaft, and a speed changing driving connection between said shaft and said member.

869,061. Supporting Frame for Canopies, Awnings, etc. Roy A. Cox, Elwood, Neb. Filed May 13, 1907. Serial No. 373,453.

1. A supporting frame for awnings, canopies and covers comprising a pair of Lshaped members, a pair of angle members
adjustably connected to said L-shaped members, a U-shaped member adjustably connected to the angle-shaped members, and
supporting arms secured to said angleshaped members and said U-shaped member.

869,109. Motor. James Thomson and Ernest Schwamberger, Pittsburg, Pa. Filed Feb. 16, 1905. Serial No. 245,974.

A device of the class described, comprising a cylindrical casing internally threaded at one end and reduced at the other end with a bearing in the reduced portion and with discharge ports at the juncture of the reduced portion and the body of the casing, an externally threaded annular member engaging the threaded portion of the casing, and with a plurality of angular recesses in its periphery and transversely of its threads, said annular member having a projecting annular sleeve internally threaded, a collar having means at one end for connecting to the source of power and with a threaded portion at the other end engaging the threaded portion of said casing exteriorly of said annular member and with a central shaft step externally threaded and engaging the threaded sleeve of the annular member, a shaft mounted for rotation through the bearing at the reduced end of said casing and supported in said step at the other end, and a water wheel having spaced peripheral blades and connected to said shaft adjacent to said annular member.

869,143. Transmission Gearing. Ross M. G. Phillips, Los Angeles, Cal. Filed Dec. 28, 1905. Serial No. 293,605.

1. A driven element, a plurality of oscillatory power transmitters for driving said element, a power shaft, a plurality of ec-



centrics on the power shaft, means operated by the eccentrics for driving said oscillatory power transmitters, and means comprising a rack having inclined teeth slidable on the power shaft for shifting said eccentrics radially of the power shaft while the power shaft is rotating.

869,171. Valve. Claud H. Foster, Cleveland, Ohio. Filed Oct. 1, 1906. Serial No. 336,956.

1. The combination, with the exhaust pipe of an explosive engine, of a valve casing or tee in said pipe, and a rotary valve body in said tee or casing having an inlet port and an outlet port, the wall of said valve body being provided with cutting edges adjacent said ports, and a removable stop for limiting the rotation of said body, substantially as specified.

869,172. Means for Heating Automobiles and the like. Claud H. Foster, Cleveland, Ohio. Filed Dec. 26, 1906. Serial No. 349,-308

1. The combination of an engine, an exhaust pipe therefor, a muffler, a heater, an inlet pipe or connection extending between said heater and said exhaust pipe, an outlet pipe or connection establishing communication between said heater and the muffler, and a valve at the junction of the inlet pipe or connection and the exhaust pipe, said valve having an outlet port adapted to register either partly or wholly with said inlet pipe and the portion of the exhaust pipe leading to the muffler and having an elongated inlet port adapted to register continually with the portion of the pipe extending toward the engine while the outlet port is in communication with either or both of its pipes, substantially as specified.

869,193. Flexible Wheel for Motor and Other Vehicles. Henry F. Nichols, Adelaide, South Australia, Australia. Filed April 20, 1906. Serial No. 312,803.

1. In a flexible wheel for motor and other vehicles, an outer flexible rim or tire comprising a number of blocks or sections and an encircling band of flexible material such as rubber, an inner rigid rim connected to the hub by spokes, a series of plate springs corresponding in number to the sections of the outer rim and set tangentially to the rim, one end of each spring being secured to the inner rim and the other end free, the central portion being secured to the middle of a section, and detachable flanges or check plates secured to the inner rim and overlapping a portion of the outer flexible rim, all substantially as described and for the purpose set forth.

869,198. Nut Lock. Jesse F. Sandbock, Jacob W. Noble, and Lee O'Dell, Tylersburg, Pa.; said Noble assignor to said Sandrock and said O'Dell. Filed Feb. 18, 1907. Serial No. 357,875.

1. In a nut-lock, a bolt, superposed nut sections thereon, the contiguous surfaces of said sections having recesses, and one of said recesses communicating with the bolt hole of the respective section, and the other recess having a cam-shaped wall, and a dog pivotally mounted in the first mentioned recess, and engageable by its cam-shaped wall for moving the dog into and out of engagement with the bolt.

869, 208. Electric Ignition of Explosives. Oliver J. Lodge and Alexander M. Lodge, Birmingham, England. Filed April 10, 1903. Serial No. 152,028.

1. In a system of spark ignition, apparatus for firing a combustible mixture, comprising in combination, a low tension circuit, a source of current in said circuit, an

interrupter in said circuit, a high tension circuit inductively arranged with relation to said low tension circuit, a spark gap in said high tension circuit, condensing means placed in said high tension circuit and adapted to discharge across said spark gap, a sparking plug forming a secondary spark gap disposed within the combustible mixture, means connecting said spark gas to the condensing means, and a connection normally keeping said sparking plug at the same potential, as and for the purposes described.

869,217. Roller Bearing. Franklin Stratton, Providence, R. I. Filed Dec. 10, 1906. Serial No. 347.173.

1. A roller bearing comprising an annular series of rollers having gudgeons at opposite ends, connected supports at opposite ends of said rollers having sockets to receive the ends of said rollers and apertures to receive said gudgeons.

869,260. Vehicle Body. Henry H. Porter, Jr., Chicago, Ill. Filed Feb. 14, 1905. Serial No. 245,561.

1. A vehicle body having a front seat, a compartment located behind said seat and an adjustable partition dividing the compartment into two sections, and provided with seats upon its oppositely disposed faces, substantially as described.

869,494. Change Speed Gear. Charles B. King, Detroit, Mich. Filed Sept. 12, 1904. Serial No. 224,057. Renewed March 30, 1907. Serial No. 365,601.

1. A part adapted to have a linear and an angular movement, in combination with other parts constituting together a speed change gear, said movable part being arranged to connect the parts of the mechanism for the different speeds in one direction by a linear movement, and for a speed in the other direction by its angular movement.

869,577. Radiator. Victor Lacing, St. Louis, Mo. Filed Feb. 19, 1907. Serial No. 358,303.

1. A device of the class described comprising a plurality of coils formed of bent sheets, the bends acting as strengthening ribs, walls supporting the ends of said coils, a casing located on each end and secured to the walls, said casings provided with passages for directing the circulation of the water, and stiffening frames connected to the edges of the coils and supported by the walls, substantially as specified.

869,583. Spring Suspension for Vehicles. Walter W. Macfarren, Pittsburg, Pa., assignor to William H. Donner, Pittsburg, Pa. Filed May 28, 1906. Serial No. 319, 126

1. In a vehicle, the combination of a body or frame, main springs supporting same, and supplemental balancing springs adapted to carry a portion of the load.

869,601. Ignition System for Explosion Engines. Richard Varley, Englewood, N. J., assignor to The Autocoil Company, a Corporation of New Jersey. Filed April 5, 1907. Serial No. 366,462.

1. In an ignition system for explosion engines, a single circuit controller permanently connected to the primary circuits of a plurality of induction coils, a dynamo circuit including a kick-off, a battery circuit including segments, and a switch for completing either of said last named circuits through said circuit controller and its permanently connected coils.

869,675. Gasolene Carburetter. Alexan-

der Winton, Cleveland, Ohio. Filed Nov. 10, 1904. Serial No. 232,167.

1. An improved carburetter, comprising a mixing chamber, gasolene and air inlet passages in communication therewith, the air inlet passage having an annular member therein constructed to form a main air passage way therearound, auxiliary passageways in communication with the interior of the annular member, and a member normally obstructing the passing of air through the auxiliary passage and adapted to be moved away from said passages under the influence of the engine, for the purpose described.

869,713. Clutch Mechanism. Peter Jenness, Philadelphia, Pa. Filed Sept. 12, 1905. Serial No. 278,075.

1. In a friction clutch, a driving member, a driven member normally held in engagement therewith, endwise compressible yielding means for holding said members in engagement, and a single endwise compressible yielding means coaxial with the shafts of said members for moderating the initial engagement thereof, said yielding means being continuously opposed to each other and both acting to set the clutch.

869,865. Spark Plug. Alfred Holsten, New York, N. Y. Filed Dec, 2, 1904. Serial No. 235,143.

1. A spark plug comprising a socket member, a contact electrode thereon, an insulated member arranged within said plug and adapted for reciprocation therein, oppositely closing valves arranged upon said insulated member, and a contact electrode carried by said insulated member, substantially as specified.

869,881. Motor Vehicle Running Gear. David M. Dearing, Jackson, Mich. Filed July 23, 1906. Serial No. 327,421.

1. A vehicle running gear frame comprising forwardly converging, flanged end beams, longitudinally and transversely extending intermediate bars, said beams being connected together and to said bars by angle plates secured to the inner faces of their webs between their upper and lower flanges, and cushioning devices for suspending said frame from front and rear axles.

869,882. Variable Speed Power Transmission Device. David M. Dearing, Jackson, Mich., assignor of one-half to Louis F. Boos, Jackson, Mich. Filed Feb. 19, 1906. Serial No. 301,891. Renewed April 1, 1907. Serial No. 365,857.

1. In a device of the character described, a driving member having a bevel toothed working surface and a flat peripheral working surface, a driven member having opposing flat working surfaces to coact with the peripheral surface on said driving member and a bevel toother working surface adjacent to the center of one of said flat surfaces to coact with the toothed surface upon said driving member, and means for varying the relative positions of said members for the purpose set forth.

869,887. Internal Combustion Engine. James F. Duryea, Springfield, Mass. Filed Jan. 19, 1907. Serial No. 353,118.

1. In an internal combustion engine of the class described, a base portion, a camshaft and commutator shaft mounted therein and having means for driving one from the other, a yoke-shaped piece carried by the engine casing, a pump casing removably secured thereto, a pump located therein, the shaft thereof having a clutch connection with the commutator shaft whereby when the pump casing is removed the pump shaft

is disengaged from the commutator shaft. 869,968. Spring Suspension for Automobiles. Edwin J. Jenness, Chicago, Ill. Filed Jan. 18, 1906. Serial No. 296,701.

1. A spring suspension for vehicles comprising, in combination, a supporting spring connected at one end to the body of the vehicle and at an intermediate point connected to the running gear, a lever pivoted at an intermediate point to the body of the vehicle and at one end connected with the opposite end of said supporting spring, a second spring secured to the vehicle, and means carried by the other end of said lever and projecting vertically upwards to engage said second spring, whereby the downward movement of said other end of the lever is opposed by the action of said second spring.

869,994. Steering Mechanism for Automobiles. Ralph P. Thompson and Emil Koeb, Springfield, Ohio. Filed Oct. 16, 1905. Serial No. 282,892.

1. In an automobile, the combination, with a main frame and an axle provided with pivoted steering ground wheels and spring connected to the main frame so as to be movable relatively thereto, of a supporting plate rigidly secured to said axle, a worm gear segment pivoted to said supporting plate and operatively connected with the steering ground wheels, a worm carried by said supporting plate and meshing with said worm gear segment, and a controlling device supported on the main frame and operatively connected with said worm, substantially as described.

870,013. Vehicle Tire. Alton W. Butler, Brockton, Mass. Filed Dec. 8, 1906. Serial No. 346,839.

1. A wheel having an annular flanged bracket secured to each side of the rim, a flange on each of said brackets extending laterally away from the side of the rim, a series of coil springs seated on said flanges and secured thereon, each coil spring having an arm which extends transversely of the face of the rim at some distance radially outward from the rim and a tread portion seated upon and secured to said spring arms.

870,052. Carburetter. George M. Schebler, Indianapolis, Ind. Filed Sept. 21, 1906. Serial No. 335,621.

1. In a carburetter, the combination, with a fuel container having a discharge outlet, of a fuel valve, and air passage communicating with said outlet, a throttle valve for controlling the flow through said passage, and intermediate connections between said throttle valve and fuel valve whereby operation of the throttle valve will automatically shift the fuel valve, and means for so adjusting the connections between the throttle valve and fuel valve that the effect of movement of the throttle, valve on the fuel valve may be independently varied at different points of adjustment of the throttle valve.

870,065. Gas Engine. Allie R. Welch and Fred S. Welch, Pontiac, Mich. Filed May 29, 1905. Serial No. 262,780.

In a gas engine, the combination of a cylinder having an interior wall at its head end in the approximate shape of a portion of the surface of a sphere, an inlet and an exhaust valve forming parts of said wall when closed, each of said valves being provided with a stem extending at right angles thereto, one of said valves being located upon one side of said axis and the other upon the other side thereof, a shaft adapted to be actuated by the engine, said shaft being located upon the head of said cylinder adjacent, and approximately at right angles, to the axis of said tylinder, a single cam

upon said shaft, and levers pivoted upon said cylinder and adapted to contact the valve stems and to be contacted by said cam to secure the proper timing and operation of said valves.

870,107. Transmission Gear. Emil Koeb, Leipsic, Ohio, assignor of one-half to Ralph P. Thompson, Springfield, Ohio. Filed Sept. 10, 1906. Serial No. 333,879.

1. In a device of the character described, the combination, with a driven shaft and high and low speed gears carried thereby, of a driving shaft extending parallel to said driven shaft, a gear rotatably mounted on said driving shaft and having inner and outer teeth, the outer teeth of said rotatable gear being permanently in mesh with said high speed gear, a pinion slidably mounted on said driving shaft and rotating therewith and adapted to engage either the inner teeth of said rotatable gear or to engage said low speed gear, and means for shifting said pinion, substantially as described.

870,171. Spring Cushioned Automobile Wheel. Walter A. Hill, Callicoon, N. Y., assignor of one-half to Valentine Scheidell and Guernsey Meyers, Callicoon, N. Y. Filed Jan. 2, 1907. Serial No. 350,392.

1. The combination of a wheel, of a body section, the rim portion of which is provided with a plurality of openings, independent compression springs arranged within the openings, said springs being arranged in an annular series, blocks at the end of the springs, said blocks projecting beyond the sides of the body section, and a tire section having openings, the end walls of which form wedges for engagement with the projecting blocks to thereby compress the springs in successive order during the rotation of the wheel.

870,183. Transmission Gearing. Elihu B Kent, Lansing, Mich. Filed Oct. 25, 1906. Serial No. 340,597.

1. In a transmission gear, the combination with a pair of engines including shafts and wheels, of a friction disc interposed between said shafts, means for connecting one or both of said shafts to the friction disc, two counter shafts, a friction gear on each counter shaft located each side the friction disc, an eccentric bearing for each counter shaft, means for simultaneousl—turning the eccentric bearings to cause the friction gears to engage opposite sides of the friction disc or to engage the two fly wheels, tnarsmission friction gears on the counter shaft, and a pinion on one of said counter shafts.

870,189. Brake for Power Driven Vehicles. Joseph N. Mahoney, Brooklyn, N. Y., assignor to himself, and James D. Leys and Samuel Jacobson, New York, N. Y. Filed Oct. 30, 1905. Serial No. 284,986.

1. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, a motor acting to impose further tension upon the spring to partially or wholly hold the brakes out of operation, retaining devices automatically acting while the motor is energized and after its circuit is opened to retain any such further tension of the spring, means for automatically opening the circuit of the motor when the brakes have been drawn to release position. a brake staff and operative mechanical connections between the staff and the retaining devices whereby the latter may be operated to abruptly or gradually release the increased tension of the spring to effect abrupt or variable application of the brakes.

870,228. Emergency Brake for Automobiles. Herman F. Dietz, Liverpool, N. Y.,

assignor of one-half to Anthony Will, Syracuse, N. Y. Filed May 16, 1906. Serial No. 317,051.

1. A vehicle brake, a support, a flexible connection carried by said support, and clamping means carried by the flexible connection adapted to engage the wheel of the vehicle and draw said flexible connection thereunder.

870,248. Pneumatic Tire. Harry A. Palmer, Akron, Ohio. Filed April 5, 1906. Serial No. 310,084.

1. The combination in a wheel rim for pneumatic tires, of a metal tire having one edge thereof cut away, pointed studs in the cut-away edge of the tire, and a flange adapted to clamp the inner edge of the tire sheath against the cut-away edge of the tire and the pointed studs therein, substantially as set forth.

970,258. Driving Mechanism for Automobiles. Edward O. Sutton, Springfield, Mass. Filed Feb. 15, 1907. Serial No. 357,-537

1. A friction driving mechanism comprising a driving disc and means to rotate the same, a second disc in axial alignment therewith, said discs being located on opposite sides of an axle or shaft whose axis is at right angles to that of the discs; friction discs rotatably supported on the axle on opposite sides of the axis of the driving disc, and clutches on the axle arranged to engage either of the driven discs at will, said clutches having a sliding movement on the axle and being rotatable therewith, together with means to move the driven discs radially of the driving discs, the clutches and the driven discs being capable of movement in opposite directions as a unit.

870,263. Clutch. William R. Warren, New York, N. Y. Filed March 7, 1906. Serial No. 304,724.

A clutch comprising the combination with a driving and a driven element, of a clutch member secured to one of said elements and provided with a pair of inclined seats having their walls at different degrees of flare or inclination, a clutch member slidably mounted upon the other of said elements and comprising two sections with differently inclined surfaces.

870,278. Cooling System for Automobile Engines. Jay N. Emley, New York, N. Y. Filed Feb. 17, 1906. Serial No. 301,528.

1. The combination of a vehicle frame having an engine compartment containing a water cooled engine, a radiator carried by said frame and outside said compartment, an air conduit leading from said radiator rearwardly of the vehicle, and means actuated by the engine for producing a draft of air through said radiator and conduit, said compartment having an opening whereby to permit air to be exhausted therefrom into said conduit, substantially as described.

870,287. Vehicle Construction. Charles J. Harris. Bridgeport, Conn. Filed Nov., 5, 1906. Serial No. 341,966.

1. An automobile having a body of the tonneau type and provided with a collapsible seat construction, the same comprising a seat bottom having a hinged back and a centrally hinged supporting rod, an underlying bracket adjacent the seat bottom and through which said rod passes, said bracket having diverging arms, one provided with a straight end and the other with a curved end, a socket at the floor of the body for receiving the lower portion of the supporting rod, a socket plate secured to a side member of the vehicle body, said socket

plate comprising a curved socket and a straight ended arms of the bracket restraight socket in which the curved and spectively are removably secured and a spring pressed latching pin for retaining the straight ended arm in its socket.

870,369. Sparking Plug for Internal-Combustion Engines. Arthur E. Lamkin, Croydon, England. Filed Dec. 4, 1905. Serial No. 290,235.

In an electrical device of the class described, a sparking plug comprising a conductor insulated from said plug, said plug having a passageway terminating at one end in a chamber, a nut secured in said chamber and having an opening therethrough, a non-return valve arranged within the opening in the nut, said nut further provided with holes for admitting air from the atmosphere within the said chamber, protective means covering said holes to exclude dust, and a tube forming a conductor mounted in the other end of the passageway and bent on itself to bring the bore of the tube in direct alignment with the first mentioned conductor.

870,549. Motor Vehicle. George P. Parks, Bedford, Ind., assignor, by direct and mesne assignments, to Postal Auto and Engine Company, Bedford, Ind. Filed Nov. 10, 1906. Serial No. 342,839.

1. In a motor vehicle, the combination of reach springs, an axle pivotally connected with the springs, means for and a condensing compartment, and means in the condensing compartment for directing the water of condensation along the partition for boiling the water to liberate the suspended gases therein.

870,502. Crank Shaft. Thomas J. Fay, New York, N. Y., and John M. Ellsowrth, Bernardsville, N. J. Filed April 8, 1907. Serial No. 367,025.

1. A crank shaft made up of a plurality of sections having surfaces facing each other, said surfaces being provided with oppositely disposed recesses and dowel buttons seated within said recesses but out of engagement with the bottoms thereof.

870,517. Automobile Rack. John A. Mason, Newton, Mass. Filed April 1, 1907. Serial No. 265,725.

1. A folding rack for automobiles and the like, comprising a skeleton frame of rigid material pivoted at its lower corners to projecting supports rigidly secured to the vehicle, the device having also depending supports connecting it to the seat-base, for the purpose set forth.

870,548. Tire Shoe. George Dentzeau, West New York, N. J. Filed Nov. 4, 1905. Serial No. 285,846.

1. In a vehicle wheel, the shoe, consisting of two halves, having serrated outer surfaces, and spoke sockets, means of holding the shells together at the bottom consisting of bolts and nuts, and means of hoiding the outer edges.

870,602. Spring Wheel. Daniel Warner, Bronson, and Horace Kitchel, Coldwater, Mich., assignors to The American Auto Wheel Company, Coldwater, Mich., a Corporation. Filed Nov. 12, 1906. Serial No. 343,172.

1. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim, said side plates being provided with inwardly projecting annular flanges adapted to receive said rim; spring

pockets on said side plates; screw caps for said pockets; spiral springs arranged in said pockets and retained therein by said pocket caps, the outer coils of the springs being adapted to fit the walls of the pockets; a felly; T-shaped outer spoke cestions, secured to said felly, the arms of said spokes being arranged in the inner coils of said springs; and guards of flexible material secured to said side plates and rim.

870,656. Detachable Tread for Pneumatic Tires. Charles B. Woodworth, Newton, Mass. Filed Dec. 12, 1906. Serial No. 347, 438

1. In a detachable tread for pneumatic tires, the tread portion; a wire substantially concentric therewith and adapted to extend entirely around the wheel, said wire being rendered expansible and contractible in the general direction of its length by its shape; and hooks connected with the tread portion and extending inward radially into engagement with the said wire, for the purpose set forth.

870,657. Traction Attachment for Vehicle Tires. Charles B. Woodworth, Newton, Mass. Filed April 9, 1907. Serial No. 367,-272.

1. In a detachable traction attachment for vehicle tires, a series of sections adapted to extend across the periphery or tread portion of the tire and each consisting of a folded flexible strap with its ends secured together whereby loops are formed at the ends of the section on opposite sides of the tire, rings secured in said loops, and detachable links intermediate of and connecting said rings, for the purpose set forth.







WANTS AND FOR SALE

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

W ANTED—Traveling salesman, experienced in selling large cars. Territory east of Pittsburg. Give reference and experience. Address N. M., Box 649, New York City.

FOR SALE—Model K Cadillac runabout, excellent condition, complete with top, lamps and generator. THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

A BARGAIN—1907 20 H. P. 4-cylinder Model "G" Cadillac runabout, best of condition; demonstration at any time. Address MORGAN & WRIGHT, 214 W. 47th St., New York City.

FOR SALE—Absolute closing out sale of the largest stock of new and second-hand automobiles in the United States. Write for Clearance Sale List No. 21. Now is the time to buy. ROCHESTER AUTOMOBILE CO., Jos. J. Mandery, Prop'r., Rochester, N. Y.

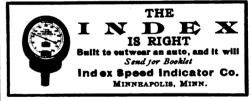
FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

HAYNES

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY Members A. L. A. M. KOKOMO. IND.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway—CHICAGO, 1702 Michigan Av.



APPERSON CARS

Eleven Models at Various Prices
Each One of Apperson Quality
APPERSON BROS. AUTOMOBILE CO.,
Kokomo, Indiana. Members A. L. A. M.

Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO.
(Estab. 1851) INDIANAPOLIS, IND.



\$375 and Upwards

The automobile for winter use. Air cooled —no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette
W. H. KIBLINGER COMPANY
Box No. 280 AUBURN, IND.



"VULGAN"
Sta-Rito
Spark Plugs

"KEEPS THE LID ON."

On Maxwells, Mitchells, Autocars, Americans, Glides, etc., in their contests. They'll do the same for you. Send for sample set.

THE R. E. HARDY CO., 86 Water St., New York City



Eliminates Useless Experiments for "Talking Points."
Studebaker Automobile Co., South Bend, Indiana

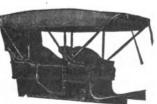
Varford

Address
Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City.
Western Inquiries
Garford Motor Car Co.
of Cleveland
1372 East 12th St.,
Cleveland.

HIGH-GRADE LAMPS Acetylene Gas and Oil ATWOOD MFG. CO., Amesbury, Mass.



SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies SPRINGFIELD METAL BODY CO., 366 Birnie Ave.; Springfield, Mass.



SMITH AUTOMOBILE PARTS.



STEERING COLUMNS.

A. O. SMITH COMPANY

243 Clinton St., Milw

Milwaukee, Wis.

The Pioneer Makers of Automobile Parts.

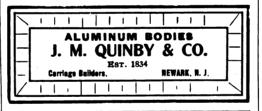
A SUPERS LINE OF CARS—
THE JAC KSON
"No Sand Too Deep—No Hill Too Steep."
2-Cylinder and 4-Cylinder
Runabouts, Roadsters, Touring Cars.
15 H. P., 24 H. P., 35 H. P.
Prices, \$850, \$1,250, \$1,500, \$2,000.

JACKSON AUTOMOBILE CO., Jackson, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO 256 Jesterson Ave., Detroit, Mich.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO.
Pottstown, Pa.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed One Year

WITHERBEE IGNITER CO.,

541 West 424 St . New York

ROLLER BEARING COMPANY

PHILADELPHIA

Manufacturers of Steel, Brass and Bronze Balls, Ball Bearings, Roller Bearings and Automobile Axles Write for New Automobile Catalogue with full particulars of

THE STANDARD TRANSMISSION AXLE.

RANKLIN MOTOR CARS LIGHT-WEIGHT, HIGH-POWER

\$250 "SUCCESS"

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy.
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Co., Inc. 531 De Balivere Ave., St. Louis, Me

MCCORD LUBRICATORS — RADIATORS "Marks of a Good Motor Car"

MCKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY
NEW YORK OFFICE—24 Broad Street.
Old Colony Building, CHICAGO.

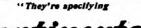
THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to

The Motor World

for one year, commencing with the issue of

Address



on 1908 Cars."

CONTINENTAL CAOUTCHOUC COMPANY 43 Warren Street New York

Representation everywhere.

"Keep your eye on Continentals"

RANCE ENGLAND ITALY AMERICA

MICHELIN TIRE CO..

Milltown, N. J.

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akron, Ohio

TRUFFAULT-HARTFORD

SHOCK ABSORBER

Mark The Device that made Safe, Speedy and Comfortable
Automobiling Possible.

Write for Rough Road Booklet to Department I.

HARTFORD SUSPENSION CO., E. V. Hartford, Pres. 66 Vestry St., New York

"THE BEST IN **MOTOR CARS**"

Palmer & Singer Mig. Co.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

EISEMANN-LAVALETTE Magnetos

LAVELETTE & CO., 112 W. 42d St.

New York

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y. Water St.



THE CONTINENTAL AUTO MFG. CO.



"The Pullman of Motor Cars" 1908 Models Ready for Delivery RAINIER MOTOR CAR CO., Broadway and 50th St., New York

1619 Broadway, New York The Ball Transmission

Automobiles & Motor Boats '





Nuts That Roquire Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts
COLUMBIA NUT & BOLT CO.. Inc.. Bridgeport, Cenn.

LIONGREST WYEAR

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St.
CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.
FOBES AUTO SUPPLY CO., Portland, Oregon.
FOBES AUTO SUPPLY CO., Seattle, Washington.
WAITE AUTO SUPPLY CO., Providence, R. I.

CIMIOTTI GARAGE

Now York City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try us.

Tel. 2686 River.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

Simple, effective, correctly designed Mahogany finish wood frame, trimmed in brass, 3-16 crystar plates, steel stay rods, bottom of frame shaped to dash of any standard automobile. Can be attached easily and quickly.

We make the London Tops. Write for details and prices.

LONDON AUTO SUPPLY CO. 1233 Michigan Avenue

AJAX YRAPPED TIRES **CUARANTEED FOR** 5,000 MILES RIDING

Write for copy of Guarantee-Dept. A. AJAX-GRIEB RUBBER CO.,

General Office, 57th Street and Broadway, New York. AGENTS IN ALL LARGE CITIES.

BRISCOE RADIATORS

Honeycomb, Flat Tube, Round Tube, Staggered Tube, Film Tube; horizontal or vertical flow; with or without casing; with or without pump. Fenders, Tanks, Hoods also made. Send for

catalog. Old Radiators Repaired. Send to nearest factory.

BRISCOE MFG. CO.
DETROIT, MICH. NEWARK, N. J.



The Baldwin Chain Company

Automobile Chains Spreakets, Spur and Bevel

Baidwin Chain & Mfg. Co.,

Logan 1908 Model T One Ton Truck

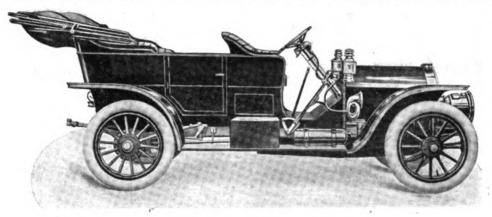
A truck equipped with a four cylinder alr cooled 20 H. P. motor, built for service and fitted to carry its load day in and day out under all conditions. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE, OHIO.



Studdard-Mayton

The Real Difference PRICE





MODEL 8-F TOURING CAR

Compares Favorably with any Car on the Market in

Quality

Performance

Reputation

REGARDLESS OF PRICE

In the parallel columns below we have made a comparison between an average of seven of the leading American built cars, ranging in price from \$4,200 to \$5,000 and the Stoddard-Dayton Model 8-F.

Power of Engine	Average of 7 Leading Cars 45-50	STODDARD- DAYTON 40-45		
Wheel Base	121-6	113		
Seating Capacity	7			
Transmission Gears	C Nickel	C Nickel		
Engine Oiling System Capacity	1 Gallon	3 Gallons		
Size of Wheels and Tires	36 x 4½	34 x 4½		
Ratio of Power to Weight	1 h. p. to 83.3 lbs.	1 h. p. to 66.6 lbs.		
Average Weight of Cars	3,750 lbs.	3,000 lbs. Double 80 Per Cent.		
Ignition System	Double			
Percentage of Parts Manufactured	60 Per Cent.			
Appearance and Quality	WE INVITE COMPARISON			
Performance	Some have beaten us	We have beaten all of them		
Price per Horse Power	\$98.80	\$67.05		
Price per Pound	\$1.25	\$0.95		
Selling Price	\$4,700	\$2,850		

The above comparison is made on a Touring Car fully equipped less the top. The only difference of any consequence is the selling price. Stoddard-Dayton is the equal in every practical way and at \$1,850 less money.

WRITE FOR CATALOG

THE DAYTON MOTOR CAR CO.,

DAYTON, OHIO

Stoddard-Mayton

THOMAS 1908

A complete line of Motor Cars of the highest quality possible in Design, Material and Workmanship. They will do what you wish your car could do



PRICE, \$2,750

Thomas 4-20 Towncar

The original Towncar, designed for City and Suburban use exclusively. Beautiful bodies, quiet operation; low cost of maintenance. The Society Car.

Thomas 4-40 Detroit

Best of all shaft-drive cars. In power, speed, hill-climbing, and reliability the Thomas Detroit leads the five passenger class.

Thomas 4-60 Flyer

Winner of hundreds of contests of speed, hill-climbing, reliability, and endurance. Has more records than any American car. This year improved, enlarged, and refined.

Thomas 6-70 Special

The six-cylinder model of the Thomas Flyer, built by America's pioneer six-cylinder builders. The greatest car in America in speed, size, reliability and refinement.

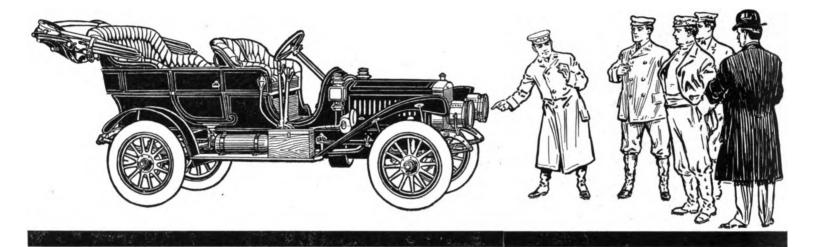
Thomas Cars Succeed

E. R. THOMAS MOTOR COMPANY

Member A. L. A. M.

Buffalo.

What a Chauffeur Knows About Automobile Prices



HERE'S going to be a grand wakin' up some day soon on automobile prices. I'm next to the game and I know," said a chauffeur.

He was proudly extolling the virtues of his car to his professional brothers.

"What's the use of paying from \$3000 to \$5000 for a motor car?—that's what I'd like to know.

"You've got to show me where you fellows' cars puts it over the Mitchell.

"I've driven your foreign cars that cost their owners \$3000 duty alone, and I've driven American cars like Johnson's there and Dorsen's that set their bosses back \$3000 and \$5000.

"I've lived in cars like them—slept in 'em—driven 'em all day long—through rain storms and over roads that were fierce.

"I've babied 'em up hills that they absolutely refused to take on the high. "I've taken 'em down and put 'em together in the garage.

"I know 'em—know 'em all from radiator to tail-light and if you fellows think you can 'show me' just where your cars have got The Mitchell skinned, come out on the road with me and let's see if you can.

"The boss paid \$2000 for this car. She's got four of the smoothest cylinders you ever saw and she's got horse-power—35—and she's done better on hills and under all road conditions than any 50 h. p. \$5000 cars I ever saw, and I've driven 'em all and run up against every test you can name.

"Your bosses may like to pay \$5000 for a car but mine was wise.

"You know there's a good many men in this country that shut their eyes tight on \$2000 cars merely because they take it for granted that a \$5000 car ought to be \$3000 better. It ought to be all right—but is it?

"I want the chauffeur that thinks his car is \$3000 better than the Mitchell to prove up with me—in speed or power or hill climbing or any old thing he thinks he's better at—that's all.

"Yes sir, if a man's in doubt about the car he wants, let him do what my boss did—make a 50 or a 500-mile test in a Mitchell.

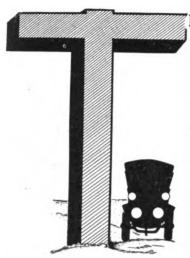
"Any agent will take him out if he's interested in gettin' a car.

"That'll 'show him' what it showed my boss—and save him about \$3000.

"Beg pardon, sir? Why, yes sir, write to the Mitchell Motor Car Company, 278 Mitchell St., Racine, Wis., and send 10c. for Art Catalog.

"Well, any of you fellows comin' out? I've got ten dollars in my pocket that says The Mitchell ain't \$3000 behind anybody's car."

Member American Motor Car Manufacturers' Association.



HERE ARE TWO

Kinds of **Automobile** Lamps

Solar and the Other Kind.

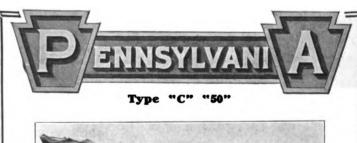
Those motor car manufacturers who use the Solar know that they are bringing their products up to the highest possible point as regards

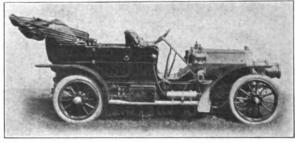
lighting equipment. On all the best cars you will find the best lamps—Solar Lamps. Specify Solar Lamps and Generators and they will be furnished. There are two kinds of Lamps—Solar and the Other Kind. Why not the best? Booklet 6 sent upon application.

Badger Brass Manufacturing Co. TWO FACTORIES Kenosha. Wis. 436 Eleventh Ave., New York City

15 TO LOOK







With Magneto, \$3000

Touring Car, Roadster, Touring Roadster, Limousine. Valve-in-head Motor, Chrome Nickel Steel, Annular Bearings.

Pennsylvania Auto Motor Co., Bryn Mawr, Pa.

PENNSYLVANIA DISTRIBUTORS.

PENNSYLVANIA DISTRIBUTORS.

Los Angeles, Cal.—Greer-Robbins Company, 1501-1505 South Main St. San Francisco, Cal.—City Hall Automobile Company, 66 Fulton St. Boston, Mass.—Frederick E. Randall Company, 245 Columbus Ave. Chicago, Ill.—B. C. Hamilton, 1218-1220 Michigan Ave. Providence, R. I.—Pennsylvania Motor Car Agency, 133 Washington St. Denver, Col.—Denver Omnibus & Cab Company.

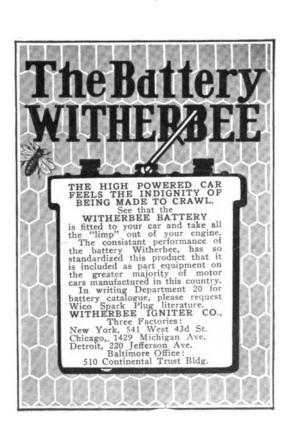
Kansas City, Mo.—Auto-Motor Company, 1122-1124 East 15th St. Pittsburg, Pa.—Bellefield Motor Company, 1122-1124 East 15th St. Brooklyn, N. Y.—Charles F. Batt, 1378 Bedford Ave.

New York City—Archer & Company, 1597 Broadway.

Spokane, Wash.—Dulmage-Rose Automobile Company, 1212 Second Ave. Philadelphia, Pa.—West-Stillman Motor Car Company, 153 No. Broad St. Baltimore, Md.—Rice's Garage, North & Madison Aves.

St. Louis, Mo.—Lakedel Automobile Company, 5143 Delmar Boulevard. Buffalo, N. Y.—Brunn's Carriage Manufactory, 1140 Main St.





THE LEADER



MODEL D-24 H.P., 4-CYLINDER, \$1,750.

N ADVANCE OF ALL OTHERS—first in giving allthe-year-'round uninterrupted service, first in low cost of upkeep, first in being a profitable investment rather than a mere comfort, and yielding the highest returnsthat is

It no longer is necessary for me to count up the many exclusive Maxwell advantages-those who are using Maxwell cars, and there are now 9,728 of them, are our best salesmen. Ask one of them.

Whether your requirements call for a small car, or for a car of medium power and medium weight, or for an automobile of forty horse-power, your particular kind of vehicle is included in our line.

Whether you have set aside for your automobile purchase \$825, \$1,450, \$1,750, or \$3,000, we make just that car, for we are

Automobile Manufacturers to the American People

J. D. Maxwell is the foremost of American automobile designers. His name and the name of his car has become a household word with every American motorist.

Let me send to you the new Maxwell catalog, which is one of the few catalogs that really tell things. Let me give you the name of the Maxwell representative in your locality. He will be glad to give you a demonstration or refer you to Maxwell owners.

Benj Brocae Prosident.

Maxwell-Briscoe Motor Company

Members A. M. C. M. A.

P. O. Box 106

Tarrytown, New York

FACTORIES:

Tarrytown, N. Y. Chicago, Ill

Pawtucket, R. I. Newcastle, Ind.

BRANCHES:

BRANCHES:

New York: Maxwell-Briscoe, Inc., 317 West 59th St.
Chicago: Maxwell-Briscoe Chase Co., 1407 Michigan Ave.
Detroit: Maxwell-Briscoe McLeod Co., 243 Jefferson Ave.
Pittsburg, Pa.: Maxwell-Briscoe Pittsburg Co., 620 Maryland Ave.
Buffalo: Maxwell-Briscoe Buffalo Co., 26 Goodrich St.
Boston: Maxwell-Briscoe Boston Co., 121 Massachusetts Ave.
Los Angeles, Cal.: Maxwell-Briscoe Willcox Co., 1321 S. Main St.
Dallas, Tex.: Maxwell-Briscoe Hanley Co., 305 Commerce St.
San Francisco, Cal.: Maxwell-Briscoe Pacific Co., 440 Golden Gate Ave.
Kansas City, Mo.: Maxwell-Briscoe Automobile Co., 1616 Grand Ave.

The Car of Steady Service

as applied to the



is more than a mere phrase, it is a title earned through correct design and careful construction and proven by years of hard, constant service wherever power-driven vehicles are known.

The practical qualities that established the Rambler reputation are,-

- 1st—APPLIED POWER. By this we mean actual tractive force as applied to the road wheels. Owing to the straight line drive of the four-cylinder models and the direct chain drive in the two-cylinder cars, Ramblers have greater propelling force per pound than any other car on the market.
- 2d-DEPENDABILITY. Ramblers are built to stand the test of hard, daily service over the worst of American roads. This condition is not reached by mere weight and masses of metal, but by simple, scientific construction in which each element is stronger than the strains upon it can ever require.
- -PRACTICAL ROAD VALUE. With the vast facilities of an enormous plant like the Rambler factory, skillfully directed to the production of two models only, greater value per dollar can be offered than is possible in a plant of lesser output.

In short, the Rambler is a car of

Power, Service and Value

Ordinary business policy dictates a careful examination of its many high qualities before ordering your

Our 1908 catalog fully describing two touring cars and a high-powered roadster is at your service: write to-day.

B. Jeffery & Company Thomas Main Office and Factory, Kenosha, Wis.

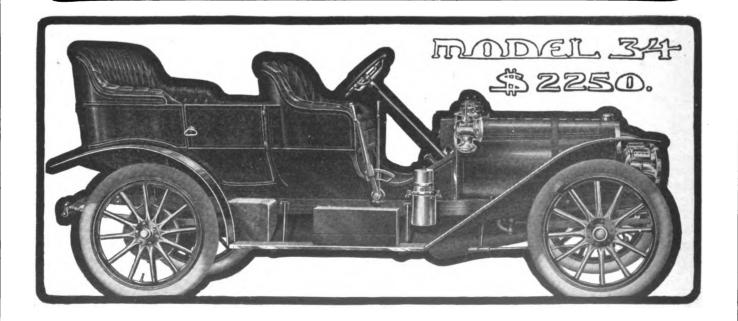
CHICAGO

BOSTON

Branches and Distributing Agencies **MILWAUKEE**

PHILADELPHIA

SAN FRANCISCO



Volume ·XVII.

New York, U. S. A., Thursday, January 30, 1908.

No. 18

ONE SECRET OF "BARGAINS" OUT

Revealed by Search for a Stolen Accumulator—But Owner Failed to Recover
His Property.

A stolen ignition accumulator which in the course of events later turned up for sale at the Times Square Automobile Co.'s "bargain" establishment in New York, and which is causing a little three cornered excitement over its recovery, serves to emphasize the wisdom of owners and chauffeurs taking complete and detailed inventories of all the equipment and accessories of their cars against the time when they will find them gone to help replenish the stock of some second hand emporium.

On "Friday, the thirteenth," of December, a storage battery was taken from a car driven by Frank Taschelein, while the machine was standing in its berth overnight at the garage of the New York Motor Car Co., in West Fortieth street. How the theft was committed nobody can explain, since the garage management has watchmen on each floor both night and day, to protect its customers. Fortunately, Taschlein had a complete inventory of everything on his car, including the serial numbers on the tires, and by consulting his book was soon able to tell the manufacturer's number on the missing accumulator. After advising the New York Automobile Trade Association, the police, and the garage management as to the battery number, and urging a lookout for it, he set about on a still hunt of his own.

With the instinct of a true detective he made for the Times Square Automobile Co.'s place on Broadway. No great surprise overwhelmed him when he beheld the stolen battery displayed for sale on that concern's counter. Politely inquiring whether it was a second hand battery, and if so, to whom it had belonged, he says he was told that it had been in the car of a physician whom the clerk named as living

in an uptown street. Less politely than before, Teschlein declared that the battery had been stolen from him, and to prove it he told them to call up the Trade Association, the garage and the police to confirm the identity of the number which he had given when the theft occurred.

"Well, it may be your battery, at that," he states he was told, "because we bought it from a kid," but there was no offer of relinquishing it.

After a wordy discussion Taschlein last week went to the detective bureau and got a police court summons against the Times Square outfit. Not wholly unprepared for such emergencies, however, the latter refused to respond to the summons, "on advice of counsel." The advice was good, since to swear out a warrant compelling their appearance and answer in police court would require the institution of "supplementary proceedings" to an action against the unknown thief, all of which would cost in the neighborhood of forty or fifty dollars while the battery itself is worth only about thirty-five dollars.

Taschlein's employer, not wishing to undertake litigation promising thus to exceed in cost the price of the battery, has not prosecuted the matter further, and the matter of replacing the accumulator has been put up to the garage people.

Makers to Meet at Detroit.

The annual meeting of the America'n Motor Car Manufacturer's Association is scheduled to be held in the Hotel Pontchartrain, Detroit, Mich., at 10 a. m., February 8th. Among other things, there will be an election of three members of the committee of management. It is also probable that the association's attitude toward future shows, which is a present cause for speculation, will be defined.

Parts Company Locates in Cleveland.

The Auto Parts Co., backed by W. B. Drown and William B. White, has opened for business in Cleveland. The company is located on Euclid avenue, near East Eighteenth street.

ALL READY FOR THE RETAILERS!

Their National Association is "Born"— Title Chosen, Manager Selected, Dues Fixed—Only Members Lacking.

If the National Retail Dealers Association does not "watch out," it will find its occupation gone. The "Association of Automobile Dealers of America" is on its scent. The N. R. D. A. was regularly organized by bona fide retailers during the Chicago show there in December last. The other "association" was not organized at all. It was simply born by the wave of a magic wand, in that house of magic on West Forty-second street, New York, styled the Spalding building, where only Alfred Reeves is an ordinary manager; practically every other man is a publicity promoter or "accelerator of automobile or public opinion," or a promoter, accelerator, organizer or magician of some sort, or very willing to be employed in such capacities.

The magicians who caused the "Association of Automobile Dealers of America" to arise from the hat are Charles A. Wardle and John R. Eustice. Until recently, Wardle was chief of the Association of Licensed Automobile Manufacturers' agency bureau. When he was relieved of those duties, the law of gravity attracted him to the Spalding building. He thought it a shame that all the knowledge and experience that he had acquired should go to waste and accordingly "got busy." He called Eustice to his aid, and together they outlined a national association of dealers, which shall require a manager and assistant manager, selected a name-and the manager-for it, and secured the indorsement of a number of friendly retailers. Eustice, who is a facile wielder of the pen, then heralded the news to the world.

"There is every possibility that the 2,000 retail automobile dealers in the United States will soon be enrolled in a national organization, with a wide sphere of useful-

ness," he said. "While this interesting movement has just become known, the movement has been under way for some time and the plans are well advanced. Ten of the largest automobile dealers in this country located in as many big cities, make up the committee on organization.

"In organizing a national association the automobile dealers are following the lead of many other retail trades. The committee on organization has decided on the name "Association of Automobile Dealers of America," and has chosen as manager Charles A. Wardle, who is undoubtedly the best posted on the automobile trade, and well known to all dealers."

When "undoubtedly the best posted in the automobile trade" was sought for specific information, he was found in company with Mr. Eustice. Wardle seemed quite anxious that his history and qualifications should be known. He returned to that subject several times, among other things explaining that he had enjoyed "four years training under George H. Day, the best organizer the world had ever known."

Asked if the association had held any meetings, he answered in the negative, but added that "conferences" had been held in Chicago and New York, at which dealers from ten different cities were present."

Would the "A. A. D. A." conflict with the National Association of Retail Dealers, formed in Chicago? Although the latter organization formally chose its title and elected officers at the Chicago meeting, Wardle did not appear to think that anything of the sort had been done, or, if so, that it was merely an echo of an old association that had proved a failure.

Between them, Messrs. Wardle and Eustice, summarized the purposes of their organization about as follows:

To make serious efforts to find markets in various parts of the world for second hand cars, to be accomplished by advertising extensively in order to bring buyers and sellers together.

To interchange information relative to trade conditions, also statistics and general information of mutual advantage.

To look after traffic conditions, rates, cars, etc., in the interests of the dealers who are required to pay the freight.

To co-operate with the manufacturers to the end that they, the manufacturers, may have the support of a large, organized, widely distributed body working together as a unit—sort of an E Pluribus Unum.

To keep records of salesmen, chauffeurs, mechanics, washers, etc., for the information of its members, "so that a dealer in Philadelphia, for instance, may not have a car destroyed by a New York washer who poses as a mechanic."

To keep track of the shifting element of the industry so that the Kansas City retailer may know the character of the Boston chauffeur who applies for work.

The dues will be \$25 a year. Two thousand dealers at \$25 per year equals \$50,000,

quite sufficient to meet the requirements of any manager, however well posted.

Local trade associations are not to be antagonized, and though they will not be admitted to membership in the A. A. D. A. their members as individuals are eligible.

Wardle volunteered the information that he had already leased an office and had an option on two more rooms to provide for expansion.

The Week's Incorporations.

Peoria, Ill.—Thacker-Brereton Co., The, under Illinois laws, with \$5,000 capital; to manufacture and deal in automobiles. Corporators—J. F. Thacker and J. T. Hunter.

New York City, N. Y.—Niagara Livery & Motor Car Co., under New York laws, with \$5,000 capital. Corporators—William Burrows and Fanny E. Burrows, Astoria, N. Y.

Camden, N. J.—Rowe Motor Co., under New Jersey laws, with \$100,000 capital; to manufacture and deal in automobiles. Corporators—John A. Riggins, Leon Berry and John M. Tobin.

Philadelphia, Pa.—Philadelphia Taxicab Co., under Pennsylvania laws, with \$200,-000 capital; to operate taxicabs. Corporators—L. T. Layton, secretary-treasurer, and Joseph Kleckner, president.

Dover, Del.—Schmidt Electric Motor Chair Co., under Delaware laws, with \$500,000 capital. Corporators—I. W. Schmidt, New York City; C. B. Walter, Brooklyn, and W. I. N. Lofland, Dover.

Jersey City, N. J.—Rutherford Rubber Co., under New Jersey laws, with \$300,000 capital; to make all kinds of rubber tires. Corporators—H. O. Coughlan, L. H. Gunther and J. R. Turner, Jersey City.

Newark, N. J.—Rotary Internal Combustion Motor Co., under New Jersey laws, with \$200,000 capital, to make engines, power vehicles, etc. Corporators—J. Hokanson, M. Hoffmann, O. Anderson, and R. Baker, all of Newark.

Terre Haute, Ind.—Wabash Auto & Electric Co., under Indiana laws, with \$10,000 capital; to deal in automobiles and conduct garage. Corporators—Frank S. Lewis, Alanson Hays, Virgil Pounds, Fred P. Giffel and Theodore P. Frank.

New York City, N. Y.—George V. Lyons Motor Co., under New York laws, with \$3,000 capital. Corporators—Marie A. Lyons and George V. Lyons, 2384 Broadway; Andrew G. Dickson, Jr., 29 West Thirty-fourth street, New York City.

New York City, N. Y.—N. S. U. Motor Co., under New York laws, with \$10,000 capital. Corporators—Gottlieb Banzhaf, Neckarsulm, Germany; Eugene Kircherer, 206 West Seventy-sixth street; Carl L. Schurz, 49 Wall street, New York City.

New York City, N. Y.—Hotchkiss Import Co., under New York laws, with \$5,000 capital; to deal in automobiles. Corporators—James M. Bessey, 66 Broadway;

Charles N. Foster, 34 New street, New York City, and John A. Breitbach, 1332A Fulton street, Brooklyn.

In the Retail World.

Renault Freres have opened a branch agency at 1549 Michigan avenue, Chicago. C. T. Ziegler is in charge.

W. L. Hibbard, president of the Hibbard Automobile Co., Milwaukee, has disposed of his interest in the concern and has retired. His successor has not been named.

A new brick and stone garage, 50x140 feet, will be erected by the Wabash Auto & Electric Co., of Terre Haute, Ind. When completed the concern will move from its present location at 925 Wabash avenue.

Fire caused a damage of \$8,500 in the garage of the Johnson Automobile Supply Co., 4.390 Olive street, St. Louis, January 17th. The largest item was a \$4,000 touring car belonging to the Sperry Mfg. Co.

Ground has been broken in Newark, N. J., for the new garage to be erected by J. W. Mason, at 350-352 Halsey street. The building, which will be two stories high, will be ready for occupancy by April 1st.

The Johnson Automobile Co. has opened a garage at 122-124 East Main street, Marshalltown, Iowa. W. W. Johnson, A. L. McKean, and George C. Shugart are named as the organizers. Ford and Mason cars will be handled.

Leigh, Neb., is real proud as it shortly will be able to boast of a garage, the only town of its size in the State to possess such a convenience. S. B. Hoelsey is remodeling the building adjoining the post-office for the purpose.

The Bergdoll Motor Car Co., of Phildelphia, has acquired the large garage and property at the northeast corner of Broad and Wood streets, that city. The acquisition is in the nature of a transfer from Louis Bergdoll, who had bought the property.

Directors of the St. Louis Auto Exchange Supply Co., doing business at 3916 Washington avenue, St. Louis, have petitioned the circuit court to dissolve the company, as it cannot meet its obligations and is doing a losing business. The company was incorporated only about two months ago with \$30,000 capital, by Charles J. Lewis, president; Fred N. Argo, secretary; J. E. Brennan, treasurer; Robert J. Thompson, H. P. Wells, Hugo Koch, and A. M. Work. The petition alleges that John W. Baker, who promoted the company did not pay \$2,000 for stock which he subscribed.

New President for Kansas City Dealers.

H. E. Roodledge was elected president of the Kansas City Automobile Dealers' Association, at its annual meeting last week. The office has been vacant since the resignation of P. B. Doddridge. C. F. Ettwein was chosen vice-president, E. P. Moriarity secretary, and W. S. Hathaway and G. L. Walls directors.

KNOX CREDITORS TO NAME OFFICERS

Appoint Nominating Committee to Choose Successors of Present Incumbents— Assignee Renders Report.

About 40 of the preferred stockholders attended the meeting of the Knox Automobile Co., Springfield, Mass., on Tuesday last, at which Assignee Mayo practically turned over the company to them for reorganization.

The stockholders, who became such by virtue of having accepted stock to the amount of their claims, did not, however, elect new officers as was anticipated. Instead, what is practically a nominating committee was appointed to decide whose resignations shall be accepted and to name their successors and the additional directors called for by the terms of reorganization. This committee is made up as follows:

Alfred N. Mayo, chairman; Robert W. Day, representing the Springfield National Bank; Edward Pynchon, representing the Chicopee National Bank; H. B. Stedman, representing the Hartford creditors; George A. Yule, representing the Western creditors. It is reported that the committee will advise the election of a new set of officials from top to bottom, with but one probable exception.

The report of Alfred N. Mayo as trustee of the company from July 22, 1907, up to January 25 last, which was rendered, showed that the receipts during that period had been \$232,368.44, while the expenditures were \$226,262,51, leaving a cash balance of \$6105,93.

The receipts were made up of the following items: Cash on hand July 22, 1907, \$345.37; received sundry old accounts, \$22,721.31; sales of cars, \$130,471.24; sales of parts, \$48,362.49; deposits sales of cars, \$3,800; loans (notes discounted), \$25,000; rent, \$783.34; miscellaneous, \$884.69.

The expenditures were as follows: Preferred claims, \$10,954.30; Greenwood Bros.' second claim, \$7,000; fractional claims (creditors), \$11,638.71; pay rolls, \$103,009.20; account branch houses, \$9,609.29; show expenses, \$5,634.01; sales traveling expenses, \$2,897.51; guarantee expenses, \$834.61; advertising general, \$2,189.61; insurance and water tax, \$664.68; miscellaneous, \$3,362.65; freight and drayage, \$3,759.39; new materials, \$64,705.55; cash on hand, \$6,108.93.

Jeffery Adds to His Real Estate.

Within the past two weeks six more acres of ground, adjacent to the factory in Kenosha, have been purchased by Thomas B. Jeffery & Co. The ground area now measures one-half mile from east to west and one-half mile from north to south. The increased demand for the Rambler has made necessary the acquisition of more space for

the enlargement of various departments and the addition of others.

O K Fails to Live up to Its Title.

The O K Machine Co., Buffalo, N. Y., makers of automobile specialties, was thrown into involuntary bankruptcy on Thursday last, W. L. Frye, secretary of the company, admitting its inability to meet its obligations. George D. Pine, Post & Lester, the Simmons Hardware Co., and the Dragon Automobile Co., were the petitioning creditors. Their claims total. \$680.50.

Incorporates to Make Meteors.

The Meteor Motor Car Co., which makes the Meteor car at Bettendorf, near Moline, Ill., took out its papers last week, the capitalization being \$50,000. Arno L. Petersen is named as president; Henry F. Petersen, vice-president, and F. W. Speers, secretary-treasurer. In addition to the officers the directors are C. N. Voss, J. H. Haas and Max D. Petersen.

Duplex Ready to Leave Roseland.

The Duplex Motor Car Co. has been formed in Roseland, a Chicago suburb, and already it is seeking a better location, several factory sites being in view. The officers of the company are: R. M. Hanson, of West Pullman, president; C. M. Hanson, Chicago, secretary; Ed. Torguerson, Roseland, treasurer. At present their shop is at 228 W. 111th street.

Midland Completes Its Organization.

Officers have been elected by the Midland Motor Co., Moline, Ill., as follows: President, C. H. Pope; vice-president, E. H. Guyer; treasurer, A. E. Montgomery; secretary and manager, H. E. Walton. The Midland company recently took over the plant and assets of the Deere-Clark company.

One More Big Garage on Broadway.

The Palmer & Singer Mfg. Co. are this week taking possession of their new building at 1620-1624 Broadway, New York, from which address the Simplex and three lines of Palmer & Singer cars will be marketed. It is one of the largest garages on Broadway, having accommodation for more than 150 cars.

Chapin En Route for the Coast.

Roy D. Chapin, general manager of the E. R. Thomas Detroit Co., has departed for a sweep of the country which will extend to the Pacific coast. As he has made the trip before, he is not visiting strangers or strange territory.

Draper Leaves Wayne for Mora.

J. S. Draper, for three years sales manager of the Wayne Automobile Co., Detroit, has resigned to accept a similar position with the Mora Motor Car Co., Newark, N. J. His change becomes effective February 1st

"THE ROBBERS ARE ON THE RUN!"

New Haven Can Tell Who They Are— Dream of a Big Automobile Factory Fades Away.

Many New Haven business people think that the number implied in the advertising catch-phrase, "The Robbers are on the Run!" which has for some time appeared in local papers, should be changed to singular. They opine that it should read: "The Robber is on the Run!" Incidentally, the police of the Connecticut city are looking for one John E. Fulton, who with his son, Rufus, operated as the Connecticut Automobile Company.

According to New Haven advices Fulton, who claims to be a descendant of the inventor of the first steamboat, came to that city about the first of October and stated that he was going to make three styles of automobiles, which would cost \$350 each. He said the cars could be built for less than \$250 and would be better than many machines costing over \$2,000. As if to prove it he advertised under the catch line, "The Robbers are on the Run."

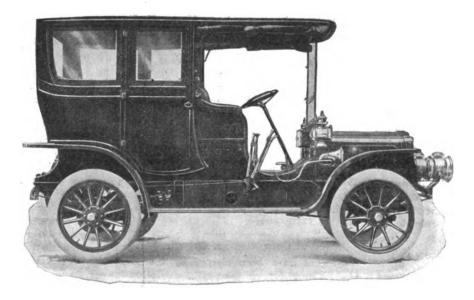
The first act of the Fultons upon arriving in New Haven was to take a ten years lease of the Armstrong factory in Congress avenue near Howard avenue. Fulton then called upon several contractors who he informed that he had the lease and that he had received it at a low figure with the understanding that he was to make all the repairs. Brainerd & Benson were given the contract to do the joiner work. Michael Rakieten was given the painting order, and E. C. Bedell was ordered to go ahead with the plumbing. Each was told that by the first of January 700 men would be employed making the machines. Work amounting to over \$1,000 was done by these three concerns and they were told that they would be paid on January 9. As there was no money on that date, Brainerd & Benson attached the machinery at the plant and took it away. Deputy Sheriff Dejou acted. Acting for some of the employes, another deputy sheriff took ten roll top desks from the office, and another official removed the typewriters, which were said to be on lease.

Then some more of New Haven became interested in the affairs and they learned that in all the Connecticut Automobile Co. had employed fifteen men, but that not a single automobile had been turned out. Also that a lot of machinery that had been ordered lay in the freight house, waiting to be paid for before it could be delivered. Of the fifteen men employed, the engineer is said to be behind \$80 in wages and a cabinet maker \$100, and it is stated that even the elevator boy was not paid. There has been a steady stream of creditors to the place since the departure of the Fultons became generally known.

Digitized by Google

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Exclusive Features of the White Limousine

The exclusive White quality of absolute noiselessness of operation is of particular advantage in a limousine because, in a car with a closed body, any noise made by the mechanism is even more noticeable and annoying than in an open vehicle.

Another exclusive White quality—namely—genuine flexibility of control, permits of the machine being guided safely and speedily through the crowded city streets. The speed of the White may be accommodated to the exengencies of street traffic without any changing of gears, jerky starts or the embarrassing and sometimes dangerous "stalling" of the engine.

As regards graceful lines and luxuriousness of equipment and finish, the White limousine must be seen to be appreciated.

Write for calalog and the address of the nearest branch or agency

THE WHITE COMPANY

CLEVELAND, OHIO

NEW YORK CITY, Broadway at 62d St. SAN FRANCISCO, 1460 Market St. PHILADELPHIA, 629-33 North Broad St.

BOSTON, 320 Newbury St. CHICAGO, 240 Michigan Ave. CLEVELAND, 407 Rockwell Ave.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Fereign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

LT Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JANUARY 30, 1908

For the Integrity of Amateur Sport.

It is to be hoped that all other of the district associations of the Amateur Athletic Union and all other sports governing organizations—will follow the example of the Pacific Association of that body and appoint "automobile commissioners" to "keep tabs" on motorists who compete for cash or against professionals and who then seek to be accepted as amateurs in other sports.

Such action will be in the nature of serving the sport of automobiling a better turn than some of its own adherents will permit themselves to see. As at present constituted, it is too much a "trade game."

Although the superb indifference of most of the American Automobile Association's officials to all opinions and suggestions save those that emanate from the "inside" has been the means of alienating the support of not a few of their erstwhile upholders, it is possible that after a few score of the men who compete under A. A. A. rules receive their proper brand, that of "professional," and find the door of amateur sport slammed in their faces, the A. A. administration will not fly in the face of public sentiment and make a mockery of amateurism, which is but another definition for genuine sport.

If automobile competition is not sport, it is up to the A. A. A. properly to define its status. It is generally written of as sport and it certainly takes the form of public contests of either speed, skill or endurance, which are the elements that contribute to sport. The old idea that sportsmanship is measured solely by athletic prowess has been or is being rapidly dissipated. Whatever is classed as sport, regardless of the implements employed, begets sportsmen and the automobile competitor who is free from trade entanglements and who competes for sport's sake and not for advertising or the money an event may net, should welcome the action of the A. A. U. since it assures him his proper distinctionthat of a genuine sportsman, which best is expressed by the term amateur.

It would seem that the American Automobile Association can well afford to take a stand for real sport by purging its rules of their present absurd inconsistencies, some of which were borrowed from abroad and the remainder inserted for the benefit of a few men of wealth.

Reform the Road Law!

Governor Hughes, in his message to the New York legislature, says:

"In making the large expenditure which is contemplated for improved highways the object is to execute a comprehensive plan in the interest of the whole State, furnishing through lines connecting centers of population and proper lateral lines to provide each section with adequate means of communication."

The Governor is quite right as to the object of spending the \$50,000,000 to be gotten from the bond issue, but that object is not being attained under the present so-called Higbie-Armstrong law, under which boards of supervisors petition the State engineer for any road they want built. Sometimes this road goes from nowhere to nowhere; sometimes it is an isolated stretch of two or three miles; sometimes it is built parallel with another good road, and all because one or two persons have influence with the board of supervisors. It certainly seems unwise to go on spending money

under the Higbie-Armstrong law instead of providing a system such as the Governor favors, which will connect the large centers of population and furnish proper lateral lines to provide each section with adequate means of communication.

The Higbie-Armstrong law has served its time. The small stretches of good road built under it were useful object lessons, but now the taxpayers should demand that good roads be built with system.

Town Cars and Taxicabs.

At present the attraction of the light weight, closed vehicle of the town type, is strong upon the makers, and with the development of taxicab services, and the exploitation of scores of companies to handle them, or that hope to handle them, there is at once a tendency to overdo the thing, and to branch out in the wrong direction. In the first place, the status of this type of vehicle is not as yet sufficiently well defined to warrant hasty judgment as to the legitimate demand for it. For another thing, experience in building pleasure cars is apt to breed over-confidence in construct ing machines which, though nominally similar in many respects actually differ from them in the material point that they must serve in the rigorous capacity of commercial utensils.

As town cars, such machines must be light, moderately short in wheel base, nicely balanced as to suspension, handily contrived as to passenger accomodation, simple in construction, economical in maintenance. and as low in cost as is consistent with sound building and a rational profit be tween producer and consumer. Furthermore, they must have a motor possessing even torque, freedom from vibration and great power of acceleration. The latter requisite is most important, since it is to be presumed that such a vehicle is to be used almost exclusively in closely crowded traffic, where quick starts and quick stops are the only means of increasing its average rate of movement. Accelerative power, thus becomes tantamount to speed.

Another use, closely allied to that of the town car, yet sufficiently different from it to alter somewhat the requirements governing its construction, is that of the suburban car, which, unlike the "demi-route" of France, is designed to answer to all the practical purposes of the useful horsedrawn station wagon. Up to the present time only one or two makers in this coun

try have essayed the construction of such a machine.

A vehicle of this description, intended to take up work which is too limited to be economical for the large touring car, and too exacting to be longer fulfilled by the horse, must have general proportions similar to those of the town car, must have most of its excellencies, but requires less accelerative power, and more speed capabilities, though not necessarily high speed power. Unlike the typical town car, such a machine requires considerable road clearance, and must be made at sufficiently low cost to make its use attractive to the present owner of a large and powerful car as well as to the person of moderate means and an insistant need of safe and economical daily transportation over short distances.

Here are two types of vehicle, closely related in many respects, as regards ideal construction, yet differing somewhat in the nature of the service they are required to perform. For both there is a probable demand of considerable magnitude, and for both an equal chance of commercial error of the gravest nature in building for sale rather than for use, or in judging too lightly of the stern requirements of machines which are to be operated the year round independent of highway and weather conditions. The field is a most attractive and promising one, especially since the sober purpose involved relieves the maker from the necessity of attempting to set or follow fashions at all closely and opens the door to quantity production. Probably it is as big an opportunity in a subsidiary way as exists in the industry today. But it must be handled wisely and well, if the too alarming consequences are to be avoided.

How Chauffeurs May Help Themselves.

It long has been painfully apparent to any one coming into close contact with professional chauffeurs and giving ear to their complaints that they consider themselves to be a much abused class who are unpopular with the world at large, though for reasons beyond their ken.

A frequent topic for conversation, in the room set apart for their use in public garages, or when two or three are gathered under the shed provided for their protection at a road house, is the lack of consideration shown them by the police in charge of traffic who invariably compel them to turn around when they try to "beat the line" or

travel on the wrong side of the thorough-

Of course this is the veriest rot, though it is only the wail that is to be expected from a type of driver who by their actions and supercilious demeanor give the impression that they are of a favored class to whom the public and the law must give way.

If chauffeurs would free themselves from the bad name that is theirs and would try to deserve the tolerance of the public they could make a good beginning by considering the horn as a means of warning people of their approach rather than as instrument with which the frighten the public from their course. And at the same time a little thought for the horse struggling with a heavy load would prompt a man with the least claim to being human to give it the right of way rather than to "hog" a course which would compel the animal to come to a stand still.

These are only two incidents that are repeatedly coming under the direct observation of the public, and their correction or elimination would do much to make people feel a little more kindly toward the drivers of cars, and it may be that if chauffeurs were sincere in their desire to deserve a good name in the community a little thought would suggest to them that they are acting towards others in a way that they would not care to be acted toward if conditions were changed and they were to become the man in the street.

Making a Bad Beginning.

Why will men engineering a movement herald it to the world while it is yet "unfit for publication," so to speak?

The so-called Automobile Dealers' Association of America is a case in point. A live organization of the sort may be made to serve some excellent purposes, but when the promoters of it, who are not retail dealers, make it so abundantly plain that the chief inspiration of their efforts is the desire to provide fat jobs for themselves, how can they hope to escape criticism?

National associations are not drawn out of hats and the plan of selecting a name, "engaging" a manager—who, of course, is one of the promoters—and fixing the amount of dues before organization actually has been effected, is too suggestive of "stacking the cards" and "giving away the game" to deserve approbation, particularly when a bona fide association of the sort already is in existence.

COMING EVENTS

February 1-8, Providence, R. I.—Show in Providence State armory.

February 3-8, Kansas City, Mo.—Kansas City Automobile Dealers' Association's annual show in Convention Hall.

February 10-15. Detroit, Mich.—Tri State Automobile and Sporting Goods Association's annual show in Light Guard armory.

February 17-22, Cleveland Ohio—Cleveland Automobile Dealers' Association's show in Central armory.

February 21-29, Newark, N. J.—New Jersey Automobile and Motor Club's and New Jersey Automobile Trade Association's annual show.

February 22, Boston, Mass.—Bay State Automobile Association's 150 miles endurance run to Providence, Worcester and return.

February 24-29, Portland, Me.—Annual show in the Auditorium.

March 2-7, Ormond, Fla.—Annual beach carnival, under auspices Automobile Club of America.

March 7-14, Boston, Mass.—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

March 9-14, Buffalo, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

March 18-25, Rochester, N. Y.—Rochester Automobile Club's show in new Convention hall.

We have no doubt that the promoters of the retailers' association will consider criticism as distinctly bad treatment, but when there is a right way and a wrong way of doing things and they choose the latter, the fault rests with themselves.

The American Automobile Association has issued an appeal to all owners and users of automobiles, and to manufacturers and agents, asking for support of the Federal Registration Bill introduced at the present session of Congress by the Hon. William W. Cocks of New York, and known as House Bill No. 428. It is the measure designed to permit citizens of the United States to enter any State in the Union without payment of an "admission fee." The man who has wearied of being "held up" and who fails to write the Judiciary Committee of the House in support of the bill must blame himself if relief is not forthcoming.

AMBASSADOR AT A. C. A. BANQUET

M. Jusserand Talks of French Triumphs, Hippogriffs and Dust Problems— Depew and Others Also Speak.

Thanks to M. Jules Jusserand, French ambassador, those overworked coinages, "whizz wagon," "benzine buggy," "gasolene goer," and the remainder of the tribe of "smart" definitions of the motor car may be laid on the shelf and given a long and much needed rest. At the annual banquet of the Automobile Club of America on Saturday evening last, 25th ult., M. Jusserand contributed an uncamphored and polite substitute for such terms. He styled the automobile "the modern hippogriff." The ambassador was the chief speaker of the occasion. It follows that the band played the "Marseillaise"

The banquet was the first held in the new club house on West Fifty-fourth street, New York. The dining hall was tastefully draped with flags and bunting, with the American and French National emblems intertwined. All the tables bore floral decorations and attractive souvenirs were at every plate. Every seat was occupied. Besides M. Jusserand, those at the guests' table were Senator Chauncey M. Depew, Gen. Nelson A. Miles, Gen. George Moore Smith, Col. John Jacob Astor, the Rev. Wilton Merle Smith, Patrick Francis Murphy, Henry Sandrum, Augustus Thomas, Dr. Schuyler Skaats Wheeler, Dave Hennen Morris, Job Hedges, Albert R. Shattuck, Charles Jerome Edwards and Oliver A. Qualye. Altogether, between three and four hundred persons were present.

President Colgate Hoyt acted as toastmaster and preliminary to his remarks proposed the health of the President of the United States and of the President of France. The toasts were drunk enthusiastically, while the band played the "Star Spangled Banner" and, for the first time, the "Marseillaise." Then Mr. Hoyt congratulated the club on the new home. paid a deserved tribute to the building committee, and said that it will have cost not far from \$800,000. Of that debt \$40,000 has been wiped out in the past year, thus reducing the mortgage obligation to \$610,000. The club membership now is 1,511 as against 1,200 a year ago, and the waiting list is a long one.

When Mr. Hoyt introduced Ambassador Jusserand the orchestra again struck up the "Marseillaise." M. Jusserand, who was seated next to Senator Depew, replied to the toast, "France, the Mother of the Automobile."

Not unnaturally he sounded the trump of France and Frenchmen and spoke of radium, dirigible balloons, and the other good things they had discovered, and said the secret of his countrymen's success in build-

ing automobiles is that "they work slowly and with patient care—a national disposition fortified by custom."

"It was Nicholas Joseph Cugnot, an officer of the Engineer Corps, who built the first automobile in 1765," said the Ambassador. "That curious old machine still exists and may be seen to-day in the Conservatoire des Arts et Matiers in Paris. Its speed was three miles an hour and it had to stop every fifteen minutes to fill its boilers—but it moved. Cugnot died in poverty, neglected and forgotten, in 1804.

"The reinvented automobile has conquered more of the world than did Alexander the Great. You will find automobiles in Madagascar and in Senegal. It inspires passions. People have been known to dispose of their property to procure one. There is romance about it. Its possibilities are exhibitating

"This modern hippogriff is king of the road, with a tendency, I fear, of becoming autocrat, too. There lies a serious danger. The pride of youth and success which shines in its glaring eyes must not lead it astray, and means must be found to pacify and befriend the slow walker, the antiquated wagon driver, the stay-at-home ground tiller, who constitute, after all, a majority. Certain means which have been unwittingly employed to silence such people should be carefully avoided.

"One of the most important problems nowadays, and one on which greatly depends the future popularity of the art, is the problem of dust. The art has no greater enemy than dust. Dust spoils the pleasure of all who use the road, spoils the machine, spoils the crops, and the growing animosity existing in certain provinces against automobilists has no greater cause. Certain it is that gardens and orchards bordering much frequented roads have lost all value, owing to the dust, which prevents the plants from breathing and kills them. I know of handsome villas now for sale because uninhabitable from the dust raised by the automobiles-for sale, but unsalable. The problem must be solved, dust must be done away with."

Scnator Depew spoke to the toast "America," the User of the Automobile." He related some of the marvels of transportation that had happened during his life time of more than 70 years, dealt out some figures relating to the automobile industry, and to highway work, and spun a few humorous stories. He mildly advocated speedways "to protect the public and develop the industry," and on the subject of speed said:

"The last to take up the automobile have been railroad men. They are accustomed to expect roadbed, ties, rails, wheels and the machinery of the locomotive to be perfect for 20 miles an hour and upward. The automobilist does his forty or fifty upon an ordinary highway with only a rubber tire and a pneumatic tube between him and eternity. If he picks up a nail or his steering gear gives out the morning paper tells

the rest and mourning friends lament his indiscretions.

"Stevenson, the great English engineer, was asked what the difference was in danger between fifty and a hundred miles an hour with the locomotive. He said, "None, because if you leave the track you will go to hell with either." The condition with Stevenson was that you must go off the track, but with the automobilist there are numberless conditions beside the tracks, therefore constant inspection of the machine, vigilance in its operation and proved intelligence in the driver are absolutely essential.

"On the health side I know from experience that the ozone which is driven into the lungs by riding in an open car at a fair speed is a specific cure for insomnia and nervous troubles. Sanity and level-headedness, together with healthy living, have come to those who have found it possible to live in the country and motor to their business places in the city and return to their homes."

"The Automobile and the Pedestrian," afforded a peg on which Augustus Thomas, the playwright, hung a succession of merry jests.

He complimented the French Ambassador and fell easily into speaking of Paris.

"A city," said Mr. Thomas, "where things are so very cheap that one may lead a double life for the same money."

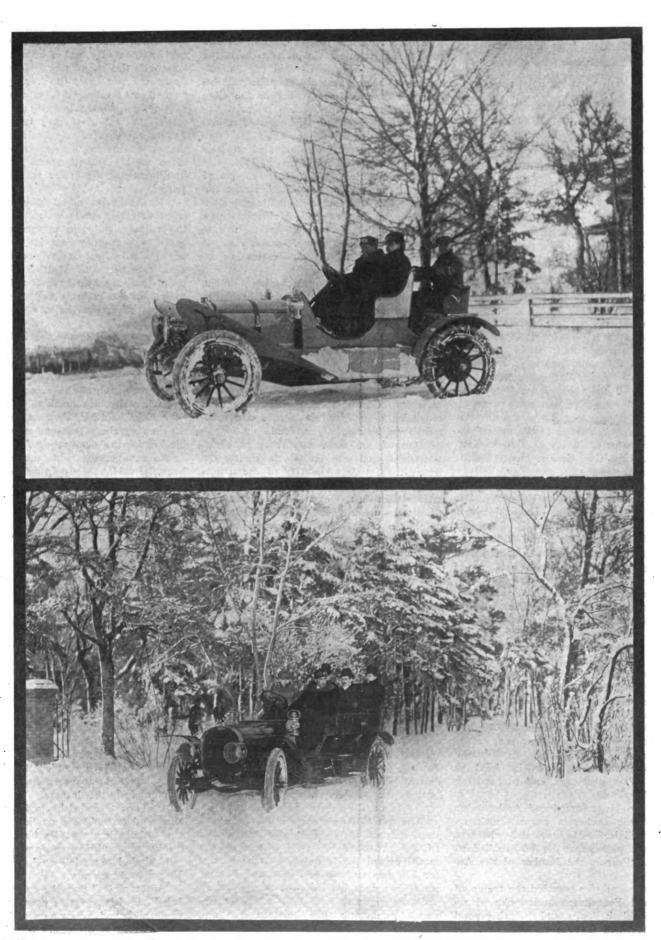
His experiences with automobiles had been, he said, entirely from the standpoint of a pedestrian. He had noticed, though, an extremely curious thing—the way sex is so clearly drawn in chickens when an automobile comes sailing down a road. An old rooster will stop with his head on one side, eye the devil wagon, remark calmly to himself, "Hell! I've seen them things before," and step dignifiedly out of the way. On the other hand a hen will squawk and shriek and scream and flutter her foolish wings and make a terrible to do, in the end, the chances are, getting herself run over.

The automobile plays a pretty important part on the stage nowadays, said Mr. Thomas. It used to be that the property man rigged up a machine of laths and a wheel to make noises which would indicate that "the carriage" was arriving and departing. Now it is a simple matter for the property man to squeeze a rubber bulb and convey the proper suggestion by a mere "honk! honk!" He added that he was the first playwright to use a suggestion of the automobile in the drama.

Mr. Thomas ended by saying that he had never advertised any particular brand of automobile, but that he had a new play coming out, and if some manufacturer would send him a late model—well, he didn't know. He was only human.

"Automobiles" was the toast assigned to Job E. Hedges, who as usual, poked fun at everything and everyone worth poking at. Job rapidly is becoming an almost indispensible adjunct of all New York banquets.





Ramblering Through Winter Landscapes

Motor Cars as Mediums for Municipal Graft

Part II, Wherein the Grafter Acquires a Fine Large Touring Car and the Pleasure of His Relatives and Friends is Correspondingly Increased at the Taxpayers' Expense—Car and Chauffeur Placed
Subject to the Order of the Grafter's Woman Friend.

My assertion last week that no form of municipal property is so largely misused and abused and so grossly and shamefully converted to private use as the automobiles paid for by the long suffering taxpayers was not lightly made.

The new "inspector," whose car I had been delegated to drive, speedily made plain that qualms of conscience did not trouble him. It is possible that the idea never occurred to him that he was misusing the car by converting it to private use and making it a medium of graft. He fell into the habit naturally. When, on the second night of his career he helped his woman friend into the car and bid me drive to a "white light lobster palace," he marked his start in the city's service smacked of remarkable boldness on the part of a new official. During his first week or so, at least, a show of conscientiousness is reasonably to be expected of a new appointee. But this was not true of this "inspector."

Conditions Grow Worse.

The end of the second day was as the end of the first and I wondered if this sort of thing was to be kept up or if it was only the usual new toy that would lose its attractiveness when it had ceased to be a novelty. I thought that this soon would be the solution of the situation and found comfort in the thought that "this wont last."

But it did last and instead of getting better it became worse. The theatre in an adjoining town was an easy run for the car, to be followed by dinner and a drive that kept me from my home until two or three in the morning, and probably later, when tire trouble, that ever present nightmare of the chauffeur, held me up for an indefinite time on the roadside, sometimes far from the help of even the feeble glow of a street gas lamp.

By this time I had an opportunity to study my new superior with the result that I concluded that he was a fine, big hearted fellow who would go to any extent for a friend and was quick to forgive an enemy. His early life had been spent far from the city, its influences and temptations, and in a place where a motor car was not only a luxury but a curiosity as well. I recall one night as we were going along one of the drives, he turned to me and said:

"Malcom, I never thought that I would see the time that I should have an automobile to do with as I pleased; I tell you it's just plain bully." And there you have the key to his character, the unaffected expression that shows his lack of appreciation of the fact that the car was given to him for a certain purpose, to be used as a means not as an end, and he failed to see it, even as he failed to realize the immense importance of his position with its responsibility to the administration and to the taxpayers, yet he was ever ready to do a favor, and was, indeed, a big, good natur-i boy.

Routine of Roystering.

My work soon settled down to a pretty regular routine. I met "His Highness, as I affectionately named him without his knowledge, at about nine in the morning, then a quick, hard drive about the city until noon, at which hour he had lunch at a club while I sought a cheap restaurant; then to the office until about three and afterward to some friend's house with its consequent wait of anywhere from fifteen minutes to three hours, followed by a ride to various hotels or apartments where friends were awaiting by appointment to join the party, then to some famous restaurant of the city or a suburban inn, and at times to a hotel in some town or adjacent state, after which the guests were returned to their respective homes and I was through my day's duty as a municipal chauffeur.

The car that we used was a low power, rear entrance tonneau which, without the top, was not a thing of joy to a user on a rainy day, so we put on a top of the semilimousine type which, with its glass panels in the back, its side curtains and glass front, offered protection to the occupants. When I first saw the addition I easily prophesied that the relaxation that had been mine on rainy days was to be a thing of the past; and I was not mistaken.

I recall one night, the evening of a day of continuous rain which had left the streets in a condition easily to be imagined, and the parkways in even worse shape for driving, I had driven "His Highness" home at about six o'clock and followed him to his rooms for some purpose; I was dumb founded when he went to the telephone and calling a friend asked him to go for a ride. As it was raining hard at the moment and gave every indication of continuing for the night I was not surprised that the invitation was declined and hoped that that would settle the question; but I reckoned without due knowledge of his fondness for the sport. One after another of his friends were called up with the same results until after four or five declinations there came an exception when two were found who would go-two women whom he called for and took to a restaurant preliminary to the extensive ride that followed through the parks and drives afterward. And all that time it rained as though the very heavens were hoping to dampen his and their ardor.

It was a common thing to load up the little car—which should never have had more than a light runabout body—with four or five adults and then go cruising about a hilly country with a load that was a tax on its power on the hills on even the first speed. My remonstrances were without result. His answer to them was usually something in this vein, "Well, it will go, won't it? Yes? Then keep it going until it stops." Explanations and remonstrations made no difference. It was always a case of "Keep her going until she stops."

Luxury Adds to Labor.

I had been driving him about for two months when there became available for our exclusive use a fine, big, 50 horse, seven passenger touring car. I was sent to get it and at first sight of its magnificance my spirits fell and all hope died within me. If the little, ante-dated, low powered, uncomfortable, scratched-up, noisy car which we had been using was capable of giving so much pleasure and capable of responding to such unusual demands, what could be the future of this modern luxurious equipage. and, much more to the point, what was to be the future of the chauffeur who was already being called upon for fourteen hours a day?

I had noticed that of many of the friends of the "inspector's" who had ridden in the old car only a few had remained faithful after the novelty of automobiling had worn away; and it was surprising how quickly it did wear away after they had been required on one or two occasions to walk up steep hills. But with the advent of the new car the old friends returned to the fold and to their ranks was added a liberal reinforcement making in all a number sufficient to furnish companionship at any time and of a quality so varied that any particular form of contemplated relaxation was sure to find its votaries in the ranks.

Of course, with all this running about on unnecessary journeys, that is, unnecessary from the viewpoint of the taxpayers who were supporting the equipages which they had supplied with an intention that they were to be utilized for the benefit of the municipality rather than as a perquisite of the office or the personal property of its accidental and temporary incumbent, the cost of maintenance and upkeep was vastly in excess of any reasonable sum that could

be conscientiously expended incidental to the actual mileage encountered in the performance of departmental inspection and official routine. Occasionally, the odometer would show as a result of the day's traveling a total of about 110 miles, of which possibly 20 would be a fair number at which to set the distance actually covered in the interests of the city. Later this was further reduced to zero unless in a spirit of charitableness one may ascribe as "official" the run to the inspector's house to get him before, and return him after, a pleasant excursion.

Free with Public Money.

In addition to the cost of upkeep incidental to the maintenance of a large car, aside from fuel expense and tire replacements, I soon found that a spirit of generosity prevailed which would permit me to obtain requisitions for accessories that under the former administration would have been denied. In this connection I recall an incident in which I figured during the period that I was driving a car for my self as an inspector of the department.

The horn bulb, which incidentally had done several years service, so far as I could find out—at any rate, the date of its pur chase was so far in the past that no one knew from whence it had come or where I could go with the hope of finding its mate or one with the same threads—had split and was useless. I sought the proper authority with the request that I be given permission to get another if I could find one, or failing in that, be allowed to buy an entire horn at a cost not to exceed \$3. The reply was characteristic of an executive who was trying to economize when spending the public's money:

"See if you can't fix the bulb. If you can't do so, I'll give you an order for another."

In contradistinction to this was the reply under the new regime when I asked permission to get a special horn which I explained would cost \$25:

"Sure, if you need it, get it."

Though it may have been a compliment to me, an expression of confidence contained in an intimation that it was believed I would ask for nothing that was not best suited for the purpose to which it was to be put and necessary to a proper conducting of the work in which I was engaged, yet it was very different from the conditions that had formerly obtained and was an expense that the executive would not have incurred if it had been for his own car to be paid from his private purse. I know the man sufficiently well to make this as a positive assertion.

For some time after the receipt of the new car it was used to a limited extent in the city's service, by which I mean that it actually carried city officials who were riding for the sole purpose of performing the duties that were demanded of them by the position that they filled. But these occa-

sions became rarer and rarer and gradually the car and its chauffeur was withdrawn from the municipal work and they became, respectively, practically the personal property and individual attendant of the inspector. They were instruments of "graft," pure and simple.

From the first I had given it out that I could not and would not be the recipient of tips or emolument other than the salary paid me by the city. My stand on this question may have caused the inspector to feel that I would not submit to being treated as a lackey and as a sop to my pride, or maybe as a tribute to my personality, I was formally introduced to the women as well as the men who were occupants of the car; and they invariably treated me as an equal-though sometimes I felt that it was graceful condescension on my part to permit it-until our destination was reached, when, if it was a restaurant or road house, they sought the guests' domain while I was left to inquire my way to the kitchen or the servants' quarters.

Meals at City's Expense.

At first it was impossible for me to seek as my proper place a seat at the tables reserved for the menials of the establishment and on several occasions I deprived myself of required nourishment rather than submit to a condition entirely foreign to me and repulsive in its suggestion that I had become a servant; but each time the deprivation had brought on a severe headache and I was forced to either accept existing conditions or resign from my position, and I chose the former.

At first it was very hard, but I found a certain satisfaction in paying for my meals and declining to permit the inspector to do it for me. It is true, and I appreciated the fact that I was being put to an unusual and unnecessary expense; unusual, because as a "city mechanic" the law required that I should work not more than eight hours a day; unnecessary, because at my home there was prepared a meal for those who were there that I could have partaken of without extra cost. But I finally had to vield even this small means of satisfaction as the eating places with very few exceptions maintained the same scale of prices for the servants' quarters that they did in the guests' rooms with the result that a simple, substantial meal was impossible under a dollar and a half and that cost coming every night was an impossible drain on a salary of one hundred a month, so I yielded even this point and it seemed to me when I signed his name to the first check that I had in fact ceased to be a city "gas engine expert" and had become a chauffeur with all that that term implies.

I had lately been receiving such a variety of orders that when one afternoon I was told to have the car at the apartments of Mrs. Blank early on the following morning I was neither surprised nor willing to remonstrate. It was raining, but I obeyed

the order and at an early hour the hall boy announced my arrival.

"Mrs. Blank says that she does not wish to go out while it is raining," the lackey told me on his return. "She directs that you return to the stable and await her call."

Think of it! And I was a city employe supposed to be performing duty only for the city and taking orders only from a city official, while the stable at which I was to await the woman's call was a municipal building.

About noon the sky cleared and a telephone message from Mrs. Blank directed me to return at 2 o'clock. During the wait I had had the car washed by the department washers so that it was with a clean vehicle I met her when she appeared with Mrs. Dash and made a round of calls to be followed by a drive through the parks until 6 o'clock, when we met by appointment Mr. Space and Dr. Keen with whom we went to an inn about 30 miles away. The inspector was not one of the party. I was subject to the lady's orders; and this sort of thing happened not once, but scores of times. In fact it had become so common for the car to be put at the disposal of friends and relatives that the inspector was frequently deprived of its use and though he had a horse and buggy and a driver also assigned to him, they could not take the place of the machine nor was the buggy as comfortable, so the little car was again put in commission and a repair shop helper taught to drive it. With this added equipment I was freer than before to respond to outside demands; and I responded, too. In this connection I may relate in passing that one afternoon I was directed to take three relatives of the inspector and show them about the city; the commissioner's car and chauffeur were detailed to the use of some visiting cousins of the inspector, and the inspector's driver was ordered to hitch up his private rig and take a sister for a drive. which is in the nature of "going some" at the taxpayers' expense.

Sight Seeing for Friends.

In the course of this sort of duty I had an amusing experience with one of the inspector's friends from a distant town—probably some place where an automobile was a rarity and the chauffeur a species entirely unknown; I had been given the usual order to take him out and show him the city as well as drive him to any places to which he might ask to go.

We had covered the city very thoroughly, had gone to the points generally visited by strangers, the drives and parks had been traversed, the famous residences had been pointed out as well as the homes of various notorious citizens whose intimate relations with the county attorney and several grand juries had been the means of making anything associated with them of interest, and finally the time came when he had to leave for a club appointment. I drove him to the designated address; as he left the car he

came, and, reaching in his pocket he remarked:

"Well, I intend to pay my fare."

He may have been a humorist or this may have been the occasion of a pathetic incident. However, I accepted the five-cent piece that he offered: I still have it—the first and only tip that ever came into my possession. I solomnly assert that the narration of this afternoon's work and remuneration, improbable as it does appear, is "the truth, the whole truth and nothing but the truth."

It struck me as being so very unusual that I entered it in my diary, from which I purpose drawing some extracts next week.

Facilitating Use of Electrics.

In connecion with the development of the vehicle industry one particular setback has been encountered in the charging problem, which always has been more or less of a hindrance to the small and local user, though the owner of a large equipment seldom has counted it an impediment to successful working. Although the electric vehicle makers and dealers always have been active in teaching the most economical usu of their product, not as much has been done to lighten the burden of the charging costs as might have been the case. The policy of the Studebaker Automobile Co., South Bend, Ind., recently undertaken, to market a mercury arc rectifier in connection with the sale of its vehicles, therefore marks a notable departure.

The rectifier is used to modify the alternating current ordinarily supplied for lighting purposes, in such a way that it may · be used directly to charge the vehicle bat-Considerable equipment which would otherwise be required is thus done away with in localities where only the alternating current is available, and the average running expense is reduced from \$25 or \$30 per month to \$8 to \$10, as is claimed. The rectifiers employed, it is said, are the first to be handled commercially by any firm of automobile makers, are similar in principle to the Hewitt device brought out several years ago, and are made on specification for the company by the Westinghouse Electric Co.

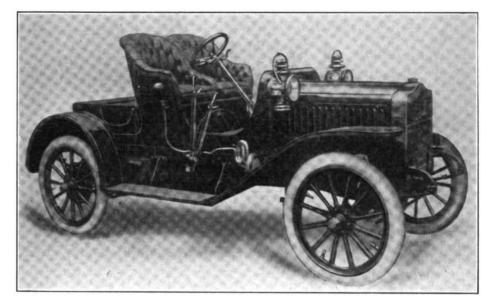
Boston Planning Taxicab Service.

Boston has one taxicab. It is the forerunner of others, if the plans of the Boston Taxicab Co. can be materialized. This company, which is a subsidiary of the New York Taxicab Co., is of recent incorporation, and has filed with the Boston police commissioner an application for approval of its rates and allotment of stands. There has been some delay in this matter for the schedule of the charges for taxicabs is different from anything in the line that has heretofore been used in Boston, and the police authorities have been obliged to give it considerable study to see that it does not conflict with the established rules relating to public vehicles.

RACINESS IN A NEW RUNABOUT

Improved Features in Latest Addition to the Maxwell Line—General Specifications of the Car.

Still another new moder has been added to the rapidly growing line of vehicles which are produced under the systematic management of the Maxwell-Briscoe Motor Co., Tarrytown, N. Y. Model K, as the are 36½ inches and 45¾ inches in length, front and rear. The rear springs are set well out toward the hubs in order to bring the load as nearly as may be to the point of support. The brakes are of the type employed on the Model D car, the external member being of the "clam-shell" type fibre lined, and hinged at the bottom, while the internal expanding brake is lined with segments of seasoned hickory boiled in oil. The general appearance of the vehicle is neat and stable, thoroughly in accord with



NEW MODEL MAXWELL RUNABOUT

newcomer is known, is very similar to Model D, insofar as chassis construction is concerned, the most noteworthy points of difference between the two being in the slight modification of the frame which is made necessary by the greater rake of steering column which is one of the features of the new type. The body conforms to the popular runabout pattern, with folding chauffeur's rumble in the rear, which is sufficiently large to accommodate two per-When collapsed, the sons if necessary. back fits nicely into the deck, leaving a smoothly finished exterior. Another improved feature, noteworthy in this connection, is the placing of the tool box in the extreme rear of the rumble, the hinge of the cover serving as the hinge upon which the rear seat folds up or down.

The general specifications of the chassis are: Four-cylinder vertical motor, with cylinders of 4½ inches "square" dimensions, rated output 24 horsepower. The three-point, unit construction for engine and change gear set, which is a well known Maxwell feature, is retained as a matter of course, as is the multiple disc clutch. The interlocking arrangement preventing careless misuse of the gears also is retained. Final drive is by propeller shaft and bevel gear to the divided rear axle, a special bearing in the differential taking up all side thrust and preventing backlash.

The wheel base is 96 inches, the wheels are 32 inches in diameter, and the springs

the other members of the line, yet sufficiently "racy" to satisfy all who desire a machine coming under that appellation.

Sidelight on Upkeep of Tires.

"Damn it! they've got to pay me," ejaculated the chauffeur who had just been "turned down" in his quest for a commission from a firm of whom he had bought a set of tires. "It was up to me to get those tires anywhere I wanted to and I picked these people out because I thought they'd give up."

"They used to," he continued, as his wrath increased, "and they'll have to again if they want the orders."

"What are you going to do," asked one of his hearers, "if none of them give commissions, you've got to have tires just the same?"

"That's all right," was the reply, "I'll have to have 'em, but," and a grin spread over his features, "but I won't have to buy them so often, for I'll keep out of car tracks and use 'em so carefully that they'll last so long there will be little 'doin' in the tire business. Oh, they'll give commissions all right, all right, before we get through."

Los Angeles chauffeurs, mechanics and repairmen have organized as the Mahout Club, which starts with a membership of 96, and these officers: President, John Keough; vice-president, Harry Bore; secretary, Sid. Kendall; treasurer, Ray Rogers.

USING THE MOTOR AS A BRAKE

Simple Method Adopted in the Panhard— Device Altering Valve Action to Cause Resistance to Motion.

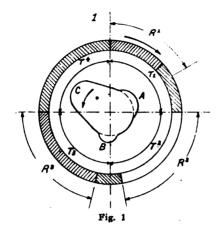
Generally speaking, the simplest and most satisfactory way to effect the retardation or stoppage of the machine is by means of friction brakes applied in any one of the several ways at present meeting with the approval of the most successful designers. At the same time, it is evident that the growing practice of supplying means of using the motor as a brake is at once logical and for long descents safer and otherwise more suitable than the use of plain friction devices. The real difference in principle between the two systems, is of course, that where in the one case the energy of the moving vehicle is converted into the heat of friction between metallic surfaces, in the other it is converted into the heat of friction between the molecules of air contained in the engine cylinders, and as such, is carried away through the exhaust without imposing any stresses on the machine other than it may be called upon to bear in its normal action.

Several of the Continental makers are now using braking devices of this description, and with considerable success, one of the simplest and most successful, judging by its design, being that applied to the 1908 Panhard cars, and shown for the first time in this country at the recent Importer's Salon in New York. It is to be understood that merely by closing the throttle tightly and permitting the car to drive the engine a certain amount of resistance to motion may be obtained. This, however, will be confined solely to the partial vacuum established during the suction stroke, and while analagous to the one-power-stroke-in-four of the regular action of the machine, is by no means as effective, as the resistance in the case of braking is not very considerable in amount. In several of the systems of motor braking in vogue, the Panhard being among them, the plan is adopted of altering the valve action in such a way as to introduce some measure of resistance to piston motion during three or four successive strokes, instead of one only. In the Panhard system, this is done by throwing an additional cam into action on the exhaust side of the motor when it is desired to use it as a brake, thus converting it into a compressor for the time being.

With this in view, the exhaust cam shaft is made slidable in its bearings, the cams being of the two-step variety, one step being of the normal profile, while the other has three lobes instead of one. When the shaft is thrown over into the braking position, the throttle being closed for the time being, the first down stroke of the piston is made against a partial vacuum. Just at

THE MOTOR WORLD

the end of the suction stroke, the lobe, A, raises the valve momentarily, admitting the gases from the exhaust manifold to the cylinder to overcome the vacuum. Thus during the first stroke T1, the resistance developed is measured by the arc B1, of the diagram. The cylinder be-

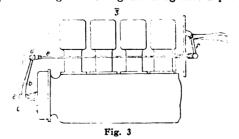


ing filled with gas at this point, the return of the piston is made against compression, the stroke, T2, having an equal arc of resistance, R2, up to the point of action of the cam, B, which lifts the exhaust valve



again for an instant at the end of the stroke, releasing the compressed air.

During the third stroke, when the explosion would ordinarily be taking place, the piston is again moving down against a par-



tial vacuum, the stroke, T3, being completed against the resistance, R3. During the fourth stroke, T4, the regular cam lifts the exhaust valve and permits the cylinder to be entirely freed of its contents. The net effect is thus to produce three strokes out of four during the greater part of which the motion of the piston is resisted. Va-

rious tests go to show that under these circumstances the braking effect of the motor is equivalent to about one-half of its power, regardless of its size.

The way in which the braking is effected mechanically is shown plainly in the second and third illustrations. Fig. 2 shows the cam and follower in elevation, the amount of longitudinal displacement necessary to effect the braking being shown by the dotted lines at the left of the figure. Fig. 3 shows the motor in outline, and reveals the outward connections which are under the control of the driver.

A short lever, b, articulated to the end of the crank case at c, is connected by means of a suitable yoke, to the end of the cam shaft at the point, a, the rod, e, taking hold of its upper end, d. A special brake pedal, f, is mounted on the foot board along side the clutch pedal and is normally held up by a spring, against which it must be moved to depress it. Depressing the pedal thus serves to pull the rod, e, forcing the cam shaft along in its bearings until the special cam faces come under the lifter. Proper interconnections are provided to prevent the throttle from being opened while the brake pedal is depressed.

About Air Baths for Varnish.

Many of the best varnishers in the carriage industry insist upon giving their varnishes an air bath prior to applying the material to the surface. When opening a sealed can of varnish they remove the stopper for perhaps twenty-four hours or more, and then prior to individual instances of use thereafter the stopper is removed for a half hour or more before using. It seems to be a well established belief handed down by the top-notch finishers of former days that the inflow of fresh air into the can of varnish is effective in dissipating a certain harmful turpentine gas generated by the tightly enclosed varnish. This gas, during an earlier day, and by not a few wellinformed finishers in this day, was and is estimated as the spirit of varnish, possessing sufficient penetrating power, and capacity for nipping into the under coats, to leave the varnish void of its natural brilliancy, and showing a distinct sanded appearance. It is not to be understood that all, or nearly all, varnishes evince this property, but the disposition is quite common enough to arouse interest in the matter, and to suggest this method of relief. At the same time, the air bath treatment can be easily, and often has been, overdone. Varnish, through the evaporation of the turpentine which it contains, if left to protracted exposure to the air, after the first extended air bath, will soon thicken beyond a free and limpid flowing state, which condition unfits it for first-rate varnishing purposes. The happy medium, as stated, consists of an initial air bath of 24 hours, and then following half-hour baths as the varnish is used In case of small shops it is a good plan to buy the varnish in one quart cans.



HOW FACTORY TESTS ARE MADE

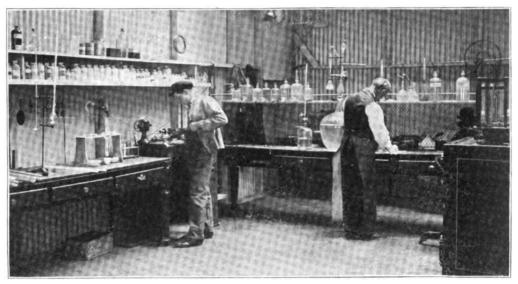
Unique Apparatus at the Rambler Plant in Kenosha—Its Broad Utility and Compact Arrangement.

Few motorists outside the direct range of factory influence have any conception of the amount of work coming under the inclusive head of testing and experiment, nor of the amount of plant which the up to date maker feels called upon to maintain for this purpose alone. Every factory has its own testing department, to be sure, but the extent to which the most representative ones are equipped for this sort of work is really surprising to one who has not kept in close touch with the development of the industry. Thus in the testing department of Thomas B. Jeffery & Co., at Kenosha, Wis., is an equipment capable of examining the characteristics of every element of the complete car from its crude state up to the point of finishing and finally in regard to its performance in the machine.

The general principles upon which such apparatus must be based, are of necessity much the same in every case. In their applications, however, there is room for considerable originality. In this way the electrical engine dynamometer designed especially for testing the Rambler motors, though similar in a general way to many others already in use exhibits a combina-

way they would be on the car, even to the carburetter, the electrical connections, and the radiator, which is mounted on a stand in front of the motor. The master clutch connects the crank shaft with a flexible coupling driving a large electric generator

actually developed by the combustion taking place within the cylinders. The singularity of the arrangement consists in the amplifications of these purposes which it is possible to bring about without altering the arrangement of the plant or performing

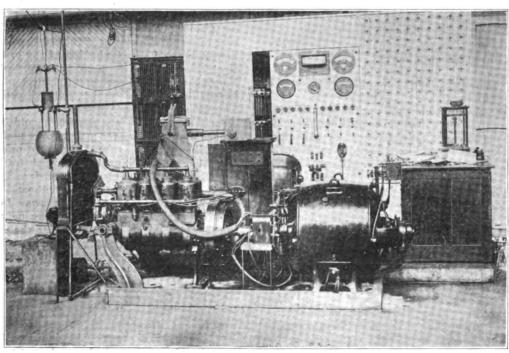


CORNER IN THE CHEMICAL LABORATORY

which may be used either as a load upon the motor, or in the capacity of an electric motor, to drive it. In either capacity the amount of current passing through the armature coils is accurately measured and affords an exact and immediate indication of the work involved, whether produced by the gas engine itself, or required to turn any more complicated operation than throwing a switch or two. A further indication of this is seen in the fact that the rear axle of a car may be substituted for the motor and the friction measured from the ground to the clutch, thus affording means of checking all friction losses in the car.

The fields of the generator are separately excited, so that all the current passing through the armature is measured directly. All generator losses are standardized and being directly proportional to speed, are applied in the form of corrections to the readings, so that the horsepower produced by the engine under test may be calculated from the volt amperes read from the switchboard. To facilitate rapid observations and reduce the time involved in making a series of test runs, however, a recording watt-meter is employed which is provided with special graduations and which is read in conjunction with a speedometer which is geared to read in miles per hour. Thus the horsepower of the motor in terms of in miles per hour instead of revolutions per minutes may be read off at once. The same observations may be made equally as well when the engine is being driven electrically and the frictional horsepower is required.

For studying the internal action of the motor a manograph is employed, and by means of an arc lamp it is possible to record the manograph cards directly on sensitized paper and without any intermediate processes, thus making permanent record of the tests. Cards so taken may be used in studying the design of the motor in a variety of ways and by making observations with the engine driven electrically, it is possible to obtain very accurate data as to the results obtained with different forms



BLECTRICAL DYNAMOMETER FOR TESTING ENGINES

tion of broad utility and compact arrangement which is altogether unique.

The engine to be tested is placed in a cradle corresponding in form to the chassis of a car, but solidly bedded on the floor, all its connections being made in the same

it over idly. Indications of the first class afford a measure of the developed horse-power of the engine, while those of the second give the self-absorbed power, or engine friction. The sum of the two theoretically gives the indicated power, or work

of valve and cam design. As these observations may be made under any sort of circumstances desired, that is to say, with the motor hot or cold, loaded or running light, or with any desired range of carburation and ignition conditions, it is evident that the possibilities offered are practically unlimited.

Mounted near the testing stand is the large marble switch board, upon which are

All wiring and other connections from the switchboard to the test stand pass under the raised floor upon which the operator stands to the service piller along side the engine, from which short leads are taken to their final destinations. All the controling mechanism is thus directly under the eye of the tester, while the complete operation of the plant in whatever way it is used, may be carried on from that stand-

sive tests, recording the elastic limits and breaking strengths which are required by the designer in order to determine the proper proportions of parts. More than this, it may be used to test the parts themselves in various ways, recording the highest load which they can carry safely and showing in advance what may rightfully be expected of the finished product once it has passed out of the crysalis stage and begun to undergo the trials of the road.

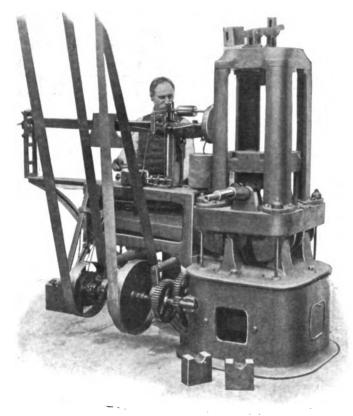


It long has been established among carriage painters, hundreds of whom are now enrolled under the banners of the automobile builders, that the main cause of the sweating of varnish is undried, or only partially dried, undercoats of color or of varnish.

An imperfectly dry coat of paint, or of any other material, will retard the drying of the coat of material applied over it, and while these coats may be, apparently, dry with the result that when successive coats of material are placed over them, the condition of the surface under the various layers of material grows gradually worse, so that when the finish is reached, all the elements are present and well developed, for the speedy appearance of the "greasy gloss," otherwise characterized as sweating out. The hurry calls for motor cars during the past year or more have necessitated a system of painting far separated from the best traditions of the craft, affirms a carriage man, and the natural sequence has been, among other untoward surface manifestations, more or less of the sweating out trouble. Given sufficient time for each coat of material, paint or varnish to harden thoroughly and the elimination of the principal cause will have been accomplished. Varying degrees of temperature affect materially the drying of varnish, and, indirectly invite the sweating out disease.

As a matter of safety, varnish should be rubbed and set away for a time, over night if possible, and then rubbed again just prior to applying an additional coat, which treatment will, as a rule, render the surface immune from sweating attacks. Without exception, varnish rubbed and set away for several hours, however hard it may be at the time of rubbing, will accumulate the essence of certain prevailing gases in sufficient quantity to cause sweating of the following coat, should removal of such accumulations by rubbing be neglected.

Electrically propelled fire fighting apparatus has already seen more or less use in Germany and Austria, but up to this time has been but little used in Great Britain. The recent construction of a new "fire escape," or extension ladder for the Liverpool fire brigade, is therefore reckoned a significant innovation. The machine carries an 87-foot ladder, electrically manipulated, and is driven by current from an 80-call battery.



MACHINE FOR TESTING MATERIALS AND PARTS

the recording instruments and a series of switches for controlling the current in the armature and fields of the generator as well as for graduating the electrical load. This consists principally of a series of iron grids, in addition to which a large bank of lamps are used. These are controlled by switches in such a way that the load can be graduated with great nicety, all fractions between .1 and 53 horsepower being obtained instantly.

A pair of fuel measuring tanks are located on the back of the board and connected with a gauge glass conveniently located. Either may be used on requirement. One is of such size that its capacity within a stated height is .1 gallon, while the other is 1 gallon. Thus the consumption of the engine may be measured closely within either short or long time limits. Cocks are provided on the face of the board for filling either of the measuring tanks from a supply tank, which also may be made to supply the carburetter directly when the consumption tests are not being made. The gears which drive the speedometer are also used for driving a magneto where one is in use, and also to operate the manograph.

point, thus saving time and labor very materially.

So complete and perfect are all the arrangements that it is possible to make a complete horsepower test of a motor at speeds ranging from 5 to 50 miles an hour within a space of ten minutes. Notwithstanding the great facility with which it may be handled, however, nothing in the arrangements has been designed with a view to sacrificing time to accuracy, and the observations may be made as closely as may be desired.

While the chief interest in the plant must naturally center about the arrangements for testing the completed machine and its components, the chemical and physical departments are equally important as determining the original status of the the materials to be used in the car. Here delicate analyses may be carried out, the properties of any "run" of castings investigated, or new formulae tried out. The picture showing a corner of the chemical laboratory gives a good idea of the apparatus used.

The testing machine shown in the third illustration, is capable of subjecting materials of all sorts to tensil and compressions.

'TWILL BE A FEATHER IN HIS CAP

Unique Trophy for Winner of Savannah's

Long Distance Race—Change in

Course for Short Contests.

Whoever wins the 360 miles race for stock cars at Savannah, Ga., on March 18th, will be able literally to place a "feather in his cap." The Savannah Automobile Club, which has in hand the promotion of the proposed meet, consisting of three stock chassis races to be held over an 18-mile circuit near the city, on Tuesday and Wednesday, March 17th and 18th, has announced that it will give a silver feather to the winner of the long race.

The idea is novel and will give to the victor a souvenir of the race besides a leg on the Savannah Challenge Trophy. This trophy is different from anything that has ever been offered, according to reports from the Georgia city.

The trophy will be a life size bust, in silver, of the Indian Chief Tomachichi, who was a leader of the Yumacraw Indians, and a personal friend and ally of General Oglethorpe, who founded the city of Savannah. A reproduction in silver of the Indian chief, which stands in a public square in Savannah, will form the base, upon which will rest the bust of the departed Indian, dressed in full war path regalia.

The war bonnet, which will be a string of feathers, will be arranged to allow the insertion of additional feathers. The plan is to have two feathers made each year the race is held. On each will be inscribed the name of the driver, the winning car, time, and other details of the like; one feather will be stuck in the head-dress of the Indian and a duplicate presented to the winner. The trophy itself will virtually be a perpetual affair as it will have to be won three times by a car of the same make before it will become the absolute property of anyone. Until that time it is expected the trophy will remain in the custody of the Savannah Automobile Club.

It is stated that two valuable silver cups will be awarded in the other two evnts. These will be known as the Southern Runabout Cup and the Southern Six-Cylinder Cup, and will become the absolute property of the entrant of the winning car.

Whether the meet will be held is problematical and depends upon how readily cars are entered. As has been stated in the Motor World, the meet will take place if thirty cars are entered before March 1st for the three events. Late reports from Georgia state that the two shorter races which are carded for the first day and over a ten mile course, will be run over the longer course, that measures eighteen miles. It also is announced that a gang of convicts already is at work repairing the roads, and making what improvements will be neces-

sary. The decision to hold the three races over one course will lessen the expense of repairing the roadway somewhat.

No Dewar Trophy Race This Year.

The one mile race for the Dewar trophy will not be held this year; at least not at the Florida meet, according to an announcement sent out this week by the contest committee of the Automobile Club of America. The committee laid down conditions that at this year's meet cars would have to cover at least 100 miles at an average speed of 60 miles an hour in one of the long races in order to qualify for the short races. This was done to eliminate freaks. It is said that both the makers of the Ross and Stanley steam cars, which have each won the trophy, objected very vigorously to this clause. As the trustees of the Dewar trophy upheld Ross and Stanley in their contention, the Automobile Club of America. without wasting any time in argument, struck the event from the program.

The beautiful conception of amateurism permitted by the American Automobile Association has been further enhanced (?) by changing the conditions for the "invitation race for gentleman amateurs" so that any one invited to drive in this contest need not own a car, but may borrow one for the occasion, providing he drives it himself.

Harrisburg's Endurance Run Program.

The Motor Club of Harrisburg, Pa., will hold its annual endurance run from that city to Philadelphia and return on May 5th and 6th, these dates having been selected at the last meeting of the club. The first day's run will be through Lebanon, Reading, Kutztown and Allentown, while the return journey will be through Norristown, Pottstown, Reading and Lancaster, a distance of about 250 miles. Cars will be divided into four classes as follows: Touring cars costing \$2,500 and over; touring cars costing less than \$2,500; runabouts costing \$2,000 and over, and runabouts costing less than \$2,000. In addition to the four trophies offered for the run, the four touring cars that were tied in the run last year will attempt to decide permanent ownership of the cup that was not awarded.

To Enforce the Rule on Amateurs.

The registration committee of the Pacific Association of the Amateur Athletic Union has begun the enforcement of the resolution adopted by the national body to the effect that automobilists who compete for cash or against professionals shall not be recognized as amateurs. The Pacific Association has appointed an "automobile com missioner" to "keep tabs" on the offenders and a considerable stir has resulted. As the automobilists on the coast have followed the ridiculous rule of the American Automobile Association, which permits an amateur to compete for money of against anyone he pleases, the action of the A. A. U. branch will prove far reaching.

START FOR NEW YORK-PARIS RACE

Foreign Entrants Depart for America Amid Enthusiasm—Meeting Here of Interested American Automobilists.

There seems little doubt now that the proposed New York-Paris race will start from this city sometime next month. Although the plans of the four American man ufacturers that are said to have formally entered cars have been kept very much in the dark the foreign delegation actually have started for New York.

According to cable dispatches the German Prothos car received a great adieu when it left Berlin Sunday morning, bound for Hamburg, where it embarked on the Kaiserin Auguste Victoria yesterday, Wednesday. In spite of the early hour the streets were crowded and scores of military attaches gathered to bid farewell to Lieut. Koeppen, of the 15th Infantry, who will accompany the car as correspondent for a Berlin newspaper. Hans Knape, an experienced race driver, was in charge of the car, and Ernest Maas, the remaining member of the crew, did not accompany it overland to Hamburg, but went to Havre to see if he could obtain any pointers from the French and Italian entrants. The Germans are due to arrive in New York City, Friday, February 7th.

The three French and one Italian entrants received just as enthusiastic a send-off when they left Paris Tuesday morning, 28th inst., en route for Havre, where they will embark on the Lorraine Saturday. The steamship is due in New York February 8th, one day after the German boat.

It is evident that the Itala car will not start, as it was not among the number that left Paris this week. The cars and their drivers were the 40 horsepower De Dion, manned by G. B. Ct. Chaffray, who originally proposed the long distance "race"; 40 horsepower Motobloc, driven by M. Godard, who finished second in the Pekin-Paris event last year; the 12 horsepower Sizaire-Naudin, with M. Pons, also a competitor in the Pekin-Paris, at the wheel, and the 30 horsepower Brixia-Zust, driven by Antonio Scafoglio. The last named is Italian, the other three being French.

A meeting of the representatives of the American manufacturers who are said to have entered cars was held in New York City last Thursday, 23d inst., when phases of the contest, relative to the American end of the affair, were discussed. Percy F. Megargle, who has made three trips across continent; John Riordan, who has been over the trail in Alaska, and Luigi Barzini, who accompanied Prince Scipio Borghese, the winner, in the Pekin-Paris "race." were present and spoke of the regions with which they were most familiar. The Thomas car was represented by Montague Roberts; the

Maxwell by W. J. Hanley and Ernest Coler; the White, by W. S. Shearman; the Corbin, by Philip Stillman, and the Reo by a representative of R. M. Owen. The general impression seemed to be that a detour would have to be made at Reno, Nev., on account of the possibilities of snow blocking the passes in the Sierra Nevada mountains. This would take the contestants to Los Angeles instead of to San Francisco, making a distance of about 4,500 miles for the trip across the American continent. It is figured that this part of the journey can be made in from 30 to 40 days, and allow for the shipment of the cars to Valdez, Alaska, so they would reach there by April 1st. Riordan, who knows the Alaska country like a book, having spent thirteen years there, said he would be willing to spend two years in jail if he could not get a car to Nome by May 1st if he left Valdez by April 5th.

From Nome there follows the run to Cape Prince of Wales, and thence across the Bering straits, which apparently is the worst part of the journey. Once across the straits is a 4,000 miles stretch across Siberia to Irkutsk, and then over the trail blazed by the Pekin-Paris contenders. From Valdez to Irkutsk, however, is country over which no automobile has yet passed, so far as is known.

ii as is kilowii.

Dayton Dealer Killed by a Train.

Edward Borderwisch, an automobile dealer of Dayton, Ohio, was instantly killed in a grade accident in that city Monday night, 20th inst. Borderwisch had taken Paul F. Moffett, a friend and civil engineer of Springfield, out for a ride about 8.30 p. m. As the automobile neared the danzerous grade crossing at Sixth street, the gates of which were up, Borderwisch slowed down to let a train pass, and then started across the tracks. Another train, following closely upon the other, caught the automobile squarely. Moffett had a miraculous escape, being tossed clear of the tracks, but Borderwisch was ground to pieces under the wheels and the automobile reduced to junk. For several years Borderwisch and E. M. Glancy who, by the way was killed in a railway wreck less than a year ago, had conducted a garage under the name of Borderwisch & Glancy. Following his partner's untimely death Borderwisch conducted the garage alone, but retained the old firm name. He was 31 years of age, and was married only December 5th last.

This Man Wants Continuous Noise.

In curious contrast to the effort made in every direction to suppress the noise produced by motor vehicles, William P. Cherrington, of Massachusetts, asks for a law to compel the use on every automobile or motorcycle of some device "which will give continuous warning of the approach of such vehicle, and will be no more objectionable than sleighbells."

THE MOTOR WORLD

CHANGES IN GRAND PRIX RULES

Regulation Limiting Piston Area Adopted for this Year's Contest—Other Important Requirements Made.

Regulations governing the 1908 Grand Prix have been adopted and issued by the Automobile Club de France, an announcement of which was made through the Automobile Club of America this week. The race is to be a distance of from 700 to 800 kilometres, and will be held within the first two weeks in July, the date and circuit to be fixed later.

Several changes are apparent in this year's rules, most important of which is the limitation of piston area, and restricting each maker to three cars, those having engines made under the same license not being allowed to enter more than three cars altogether.

After considerable wrangling at the Ostend conference a definition was adopted fixing a maximum bore of 155 millimetres for a four cylinder engine, or its equivalent in surface for any other number of cylinders, and a minimum weight of 1.100 kilos without fuel and water, but including oil in the crank case and gear box. This definition results in a maximum of 75,476.8 square millimetres for a four cylinder engine and the equivalent bore for motors of more or less than four cylinders is as follows, without taking into account the decimals: For 1 cylinder, 310 millimetres bore; 2 cylinders, 219 mm.; 3 cylinders, 179 mm.; 6 cylinders, 127 mm.; 8 cylinders, 110mm.

The entrance fees fixed are \$1,000 for one car, \$1,800 for two cars, and \$2,400 for three cars, acceptable until February 1st, after which date double fees will be charged.

Another important clause in the rules is that which forbids the use of anything other than ordinary gasolene; that is to say, the addition of any ingredient which aims at supplying oxygen other than that contained in the atmosphere, will not be countenanced.

All cars must have a reverse and must be fitted with mufflers having a horizontal outlet. All repairs must be made by the driver or mecanicien, and detachable rims may be used, but the changing of wheels is prohibited. A mecanicien may change places with the driver at the end of any lap, but while on the circuit may change only in case of extreme necessity.

The official colors adopted were as follows: Germany, white; America, white and red; England, green; Belgium, yellow; France, blue; Italy, red, and Switzerland, yellow and red.

Automobile Corps for German Army.

Germany is preparing to utilize the automobile for army purposes in a large way. The Budget Commission on the 22d inst.

passed favorably on a bill setting aside a fund of nearly \$500,000 for the organization of an automobile transport corps. The plan is to place at the disposal of the army during manoeuvres and in time of war, automobiles of the heavy type used for rough traffic by manufacturers, express companies and others having such traffic. In furtherance of the plan it is proposed to pay an annual subsidy to owners of such vehicles.

Proposed Lien Law for Garage Men.

Garage men have a friend in Assemblyman Orson J. Weimart, of Buffalo, who has introduced a bill into the New York legislature to amend the lien law so as to give them liens on automobiles for services in connection with them. The proposed section reads:

"A person keeping a garage or place for the storage, maintenance or repair of motor vehicles, and who in connection therewith stores, maintains, keeps or repairs any motor vehicle at the request or with the consent of the owner, whether such owner be a conditional vendee or a mortgagor remaining in possession or otherwise, has a lien upon such motor vehicle for the sum due for the storing, maintaining, keeping or repairing of such motor vehicle, and may detain such motor vehicle at any time it may be lawfully in his possession until such sum is paid."

Court Calls Automobile a Necessity.

That the automobile is a necessity was the opinion expressed last Thursday afternoon, 23d inst., by Justice Marceau in the Equity Term of the Supreme Court in denying the application of John H. Love, Jr., for an order to force Arthur E. Luscher to remove a garage from his premises at 292 East 17th street, Brooklyn, on the ground that it injures property. According to the terms upon which the property in that section was sold only one building can be erected upon each of the plots of land. The complainants said that Luscher violated the terms upon which he acquired the property, while the latter declared he did not as he had built a one-story extension to his residence, in which to house his car. The Justice thought Luscher had acted within his rights and in denying the application took occasion to say that automobiles are a necessity nowadays.

Brockton Club has Awakening.

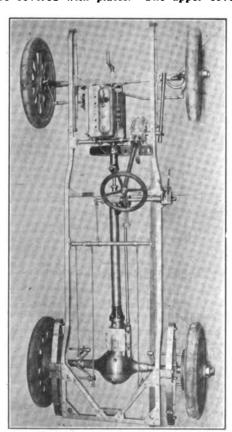
At a special meeting of the Brockton (Mass.) Automobile Club held on January 20th, the following officers were elected; President, Elmer Walker; vice-president, Henry R. Burbeck, of North Abington; secretary and treasurer, H. A. Churchill. The terms of the former officers expired with the beginning of the year, but no meeting was held to elect new officers as the old ones were unwilling to become candidates for re-election because of general lack of interest in the club. Now it is purposed to infuse new life into the organization.

THOMAS TAXICAB CONSTRUCTION

Block Type Motor One of Its Prominent Features—Other Elements Contributing to Economy of Upkeep.

Among the new designs which the recent show season brought to light, probably none attracted a greater amount of favorable comment than did the new Thomas town car and taxicab chassis. While excellently developed as a light and efficient vehicle for city use, and especially so in the hands of the private owner, the recent booking of orders for a large number of these little machines to go into commercitl service in New York and Chicago directs attention to their particularly utilitarian aspects.

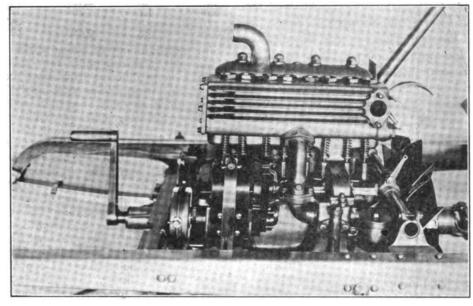
The essence of the Thomas taxicab chassis is the block type motor which, as shown in the accompanying picture, consists practically of but two castings, one of iron and the other of bronze. The former contains the four cylinders, together with their valve pockets, water jackets, and also the intake and exhaust manifolds. The second casting serves as the engine base, also carrying one of the two water ports for the thermosyphon cooling system, the carburetter mixing chamber and the gear housings. The cylinder casting is cored through from the forward end, and from above, leaving an opening at the front and one at the top to be covered with plates. The upper cover



THOMAS TAXICAB CHASSIS

also carries the outlet pipe for the cooling system, which leads directly to the radiator. The exhaust manifold, which lies to the outside of the cylinder casting is amply cooled by means of longitudinal flanges running its entire length, while its proximity to the intake port serves to warm the incoming gases sufficiently to aid the effect

line and in front of the dash board. In this position it is perfectly accessible at all times, and, as shown in the picture, may be dismounted without removing its housing from the frame, or may be adjusted and cleaned by simply removing the large cover plate which is placed in front. The same attention to detail which characterizes this



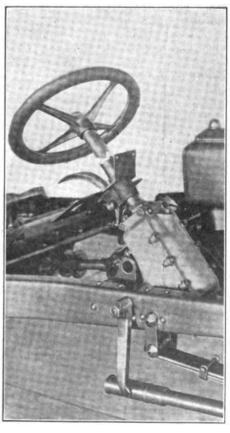
THOMAS BLOCK MOTOR

of compression in producing a quick-firing mixture.

The base casting is supported on a tubular hanger running across the car just over the crank shaft in the rear and at a single point below the radiator seat in front, making a three-point support of the most approved pattern. The crank shaft is supported on two annular ball bearings, and the two-to-one gears in front are completely housed in the case, as is the additional gear which drives the Bosch high tension magneto—the only means of ignition provided.

The regular type of triple-disc clutch which is a feature of Thomas design is employed in this, case, the fly wheel having fan blades cast in its periphery to aid in cooling the motor and providing the only draught which is required for the purpose. Back of the clutch is a single universal joint inside a yoke which carries the combined shaft casing and torque tube. The change gear group is mounted on the bronze housed rear axle and as the accompanying view of the chassis shows, the only external parts are the tube and the gear-striking and brake rods. The latter extend to the double internal brakes. Of these, the emergency set are expended within drums provided outwardly with air-cooling flanges, which serve to keep down the working temperature when long-continued service is demanded

Another feature of the chassis construction which tends to a reduction in repair bills is the method of mounting the steering gear, which is placed above the chassis feature is present throughout the vehicle, which may be repaired or adjusted entirely from above without the necessity of running it over a pit.



THOMAS STEERING GRAR

AMMETER FOR TESTING THE COIL

Novel Method Suggested for Improvement of the Timing—How Trembler Lag

Affects the Spark.

It is only recently that the attention of the motoring public has been called at all closely to the more intimate details of the action of the ignition system. Beginning with the development of the idea that the relative "fatness" of the spark had little to do with the effectiveness of the ignition, it has been shown that there are many matters in connection with the operation of the ordinary jump spark, to say nothing of the magneto systems, which even yet are but little understood. In this connection, a foreign ignition specialist has recently placed on the market an ammeter of special construction which is designed for the specific purpose of adjusting the coil with regard to economy of action and uniform regulation of the timing.

As is well known, the action of the common vibrator coil is always subject to a greater or less amount of lag representing the very small increment of time between the closing of the primary circuit and the instant when the first induced spark passes the points of the plug. This lag varies with the temperature of the coil and also with the amount of current being sent through it. Furthermore, it is apparent that with even a very slight variation in the adjustment of the several vibrators of a multiple coil a considerable variation in the distribution of the secondary takes place, which must serve to alter the timing of the explosions to a considerable degree.

By way of determining the actual performance of the coil with absolute accuracy, a special device has been employed which consists primarily of a commutator so contrived that the angular length of its contact can be altered. On the same shaft, a high tension finger is located, which travels close to the face of a stationary disc which is graduated into 360 degrees. When the low tension circuit is closed, the high tension spark jumps the gap between the finger and the disc, the point of action being clearly observable. Such an apparatus was used in a series of experiments performed some little time ago, in which the subject of trembler lag was investigated and a number of new points developed. Its use in this connection was to establish certain standard relations between the consumption of the coil and the position of the first spark to pass the gap at the plug, considered with relation to piston position. The following table, taken with an arc of commutator contact 52 degrees in length, shows the amount of variation in timing which may be brought about by differences in trembler adjustment:

Consumption at rest. Amps.	Consumption running Amps.	Revs. of commutator shaft.	Position of first spark.
.75	.6	264	2°
.75	.ŏ	932	12°
.75	.6 .6	2.464	36°
1.0	.7	264	5°
1.0	.7	932	16°
1.0	7	2.464	43°
1.5	. <u>'</u> 9	260	8°
1.5	. <u>6</u>	940	23°
1.5	.8	2.464	50°
2.0	1.1	264	12°
2.0	1.8	940	36°
2.0	1.2	2,460	60°

These observations of course apply only to the particular coil under test, and are probably quite different from what would be obtained from similar tests applied to typical American coils, or even to coils of the same make under different conditions of adjustment, and installation in the car. Nevertheless they serve well by way of illustration, and bring out the real point, which is that, variations in current consumption involve variations in the timing of the spark. Regarding the observations in question, the maker says: "Taking for instance a four-cylinder engine with 4-inch stroke (bore of no importance), and a quadruple coil. . . . let the firing position at the retarded point be at the top of the stroke in the cylinder, and let each trembler be adjusted to .75 amperes (not running) for No. 1 cylinder, and 2 amperes No. 2 cylinder, 1.5 amperes No. 3 cylinder, and 2 amperes No. 4 cylinder, a general adjustment which we might mention in our experience is by no means uncommon: we have often come across quadruple coils running at varying consumptions from 1 to 4 amperes, so that in taking this particular instance we are taking an average. Then we have at, say, full advance (reckoning on a 60 degree full advance) at 932 commutator revolutions of 1.864 engine revolutions, No. 1 cylinder firing 1.15 in. from the top of the stroke, No. 2 cylinder .97 inches, No. 3 .82 inches, and No. 4 cylinder .575 inch, a position of affairs which is not likely to give one the sweetest running, and which is indeed most detrimental to the life of the instrument. More mysterious knocking is caused by this than one would imagine. Again, the use of a meter enables one to gauge to a nicety the proper and safe consumption for any type of coil, once the owner has been informed of the proper consumption which is best for allround purposes. This consumption, whatever it is, can be checked periodically, especially when any alteration to the adjustment is made in the manner of filing of the platinum points, replacing of screws, blades, or armature, when it becomes difficult to most people to adjust the tremblers to give the best results. The use of an ampere meter will decrease this work very considerably.

"One cannot accurately by the sound of the trembler, nor yet by the appearance of the spark, tell if a section is performing its work properly. A good strong buzz is as likely as not due to the fact that the consumption is high, or, in other words, that the tension of the armature spring or platinum blade is too great. The appearance of the spark also is very deceptive. The length of the spark may remain about the same, but its fatness and heat may be considerably increased, and yet to the unpractised eye appear approximately the same. This will show that a meter is a most necessary factor for determining the coil output.

"One of the dangers of a coil consuming too much current is the general melting of the insulation both contained in the bobbin and surrounding it, resulting in a considerable attenuation of the spark, which from that time forward cannot be rectified. This attenuation is given in the figures as under:—

Continuous consumption 2½ amps. Starting temperature reading of thermometem 18.6° Cent.

Time.		Temperature of wax				x I	Length of spark.		
Zer	o				18.6	°°	15	mm.	
1/2	hour				25.2	20	14	"	
1	"		meltin				14	66	
11/4	"	44	"	8	36.2		14	44	
1½ 2 2½ 3	**	"	44	••	38.3		14	64	
21/2	. 44	"	"	• •	41.4		13.5	44	
3	64	" ,	melted	• • •	44.3		13.5	66	
3½ 4	44	æ	"	•	47.6		13	"	
4	"	"	46	•••	49.4		13	66	
41/2	44	44	66		50.0		13	"	
4½ 5 5½ 6	**	50 C	., end	of.				66	
51/2	"	""	"	"	8	44	12	"	
6	"	44	"	"	"	"	12	"	
61/2	44	44	"	"	"	66	12	66	
6½ 7	"	46	"	"	44	"	11.5	"	
71/2	"	44	44	"	44	"	11.5	44	

"This test was carried out by embedding into the insulation of the wax surrounding the bobbin an ordinary Centigrade thermemeter."

While it is evident that to the ordinary user the ammeter may not be of great value as applied directly to the tremblers, still it is likely that by inserting the instrument in the primary circuit with the motor at rest and turning over the commutator from contact to contact, adjusting the tremblers to give the same consumption in each case, a much closer approach to synchronism might be obtained than is possible with the ordinary means of adjustment by eye and ear alone. So far as is known, the idea is entirely novel, and though the difference in consumption between stationary and running conditions is not exactly the same for all speeds, it is nearly so, and with vibrator springs of uniform temper, should vary but little in any given coil.

About Blanketing the Radiator.

It is all well enough to cover the bonnet of the car with a robe or blanket during cold weather, when it is necessary to leave the motor for some little time without withdrawing the water from the cooling system. It should be remembered, however, that the protection against cold also is a protection against the radiation of heat, and care should be taken not to run the motor for more than a moment or two with the bonnet covered in this way as otherwise serious overheating may result.



The Week's Patents.

870,666. Vehicle Brake. De Witt Cookingham, Cleveland, Ohio, assignor of one-half to John H. Hertner, Cleveland, Ohio. Filed June 23, 1906. Serial No. 323,023.

1. In a vehicle brake, a brake frame and brake shoes adapted to frictionally engage said frame, a member on which the said shoes are pivotally supported, means for forcing the shoes into engagement with the brake frame, said shoes being wholly incased, and means accessible from the exterior of the incasing structure adapted to move the shoes toward the brake frame at the pivotal points.

870,794. Steering Mechanism. Harry E. Norris, Arnold, Ohio. Filed Dec. 12, 1906. Serial No. 347,487.

1. In a steering mechanism, the combination with the connecting bar of the wheel axles, of a plate secured to said bar provided with outwardly projecting sleeves, pins mounted in said sleeves carrying antifriction rollers and a worm wheel carried by the main axle meshing with said rollers for the purpose described.

870,795. Speed Indicator. Ed C. Oliver, Minneapolis, Minn., assignor to Harry E. Pence, Minneapolis, Minn. Filed Nov. 13, 1906. Serial No. 343.238.

1. In a speed indicating device, the combination, with a rotating spindle, of a weight centrally pivoted thereon and having a cam surface, a spring, a lever bearing on said spring and on said car surface, the effective leverage of the spring on the cam varying with the speed of rotation.

870,796. Tire Protector. Russell Parker, New York, N. Y. Filed Nov. 22, 1905. Serial No. 288,545.

1. A tire protector having a free edge with a limiting device to restrict its diameter, the other edge being unrestrained to allow the protector to be slipped over the tire and to be drawn tight at individual points, and a number of holders extending from the other edge of the protector and adapted for connection with the wheel,

871,032. Means to Record the Speed of Automobiles. William A. Cheesebro, Los Angeles, Cal., assignor, by direct and mesne assignment, of one-third to David E. Lyons and one-third to William H. Sheasby, Los Angeles, Cal. Filed Jan. 25, 1906. Serial No. 297.845.

1. The combination with a drum, means for rotating the drum, and means for carrying a record sheet upon the drum, of a drive shaft, a governor on said drive shaft, a grooved support carried by the drive shaft, said support having a longitudinal movement on the shaft, a record marker carrying rod slidingly supported in bearings and having a fork on its inner end which engages the grooved support connected with the governor, a marker supporting bracket mounted on the marker carrying rod, a record marker secured to said bracket, and a spring rigidly secured at one end to the marker carrying rod and coiled around the latter with its free end resting upon the projecting end of the holding bracket.

871,098. Means for Driving Motor Road Vehicles. Martin Albrecht, Friedberg, Germany, assignor to Felten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Filed Feb. 20, 1907. Serial No. 258,468.

1. In a motor car, the combination of

a plurality of independent driving wheels, a prime motor, an electric generator, differential gearing connected with one element of said generator, and with two of the driving wheels, and electric motors adapted to be energized by said generator and arranged to drive others of said wheels.

871,108. Transmission Gear for Motor Lorries and other Vehicles. Adolphe Clement, Levallois-Perret, France. Filed March 16, 1905. Serial No. 250,468.

In a motor vehicle, an axle for the driven wheels, a differential gear mounted outside of the axle, a longitudinal driving shaft connected to the driving pinion of the differential gear by a universal joint and connected to the main shaft by a universal joint and a pair of stays connected to said axle near its ends and converging to the center of the vehicle and connected by a universal joint to the frame of the vehicle.

871,109. Steering Mechanism for Motor Cars. George H. Coates, Worcester, Mass. Filed March 28, 1904. Serial No. 200,264.

1. In a steering mechanism for motor vehicles, the combination with a rotating shaft, of an inclosing case for said shaft consisting of a straight section and a curved section capable of rotating about an axis coincident with the axis of said straight section, a joint between said straight section and said curved section, and means for locking said curved section at any point in its movement about said straight section.

871,134. Carburetter. Joseph G. P. M. Monnier and Antoine M. Morin, Boulognesur-Seine, France. Filed March 13, 1906. Serial No. 305,839.

1. In a carburetter, an atomizing chamber having a conical shape at its lower end, and an air inlet at its bottom, a nozzle extending through the lower conical portion, and an inverted hollow apertured mixing cone having an open lower end situated over the nozzle, said atomizing chamber having auxiliary air inlet ports in its side opposite said mixing cone.

871,159. Tire. Winthrop D. Baker, Brockton, Mass. Filed July 16, 1906. Serial No. 326 421

1. A resilient tire constructed in ring-like sections, each of which is provided with a base enlargement producing retaining lugs adapted for reception in the rim of a wheel, a rubber core threaded through said sections, tie wires also threaded through said sections and adapted to secure said sections together, a wheel rim constructed in sections mounted to slide transversely with relation to each other and adapted to grip the retaining lugs of the tire sections, and bolts extending transversely from one section of the rim to the other and through the base enlargement of the tire sections, whereby to bind the two sections of the rim together and to assist in holding the tire sections in the rim.

871.169. Pneumatic Tire. Frederic C. Hood, Boston, Mass. Filed June 11, 1906. Serial No. 321,229.

In combination, a rim having a substantially flat surface and a permanent retaining flange on one side, a removable flange on the opposite side, inwardly extending projections having inclined faces at the junctions of the flanges and rim, said projections serving to brace said flanges, bolts passing across the face of the rim and through said projections and connecting the permanent and removable flanges, and a resilient tire seated on said rim and confined between said flanges, said tire having transverse grooves to receive the bolts and

corner recesses to receive the lugs, substantially as described.

871,786. Pneumatic Equalizer for Vehicles. Chaim Rosenzweig, New York, N. Y. Filed April 28, 1906. Serial No. 314,117.

1. In a vehicle having a steering portion, the combination of two members arranged one above the other, hollow cushions interposed between said members at each side of the carriage, and means controlled by the movement of the steering portion of the vehicle for admitting fluid to the cushions on one side of the carriage or the other whereby such side may be raised relatively to the other side.

871,233. Changeable Speed Gearing. Albert L. Muren, Belleville, Ill. Filed Oct. 25, 1906. Serial No. 340,541.

1. In a changeable speed gearing, the combination of a driven shaft, a longitudinally shiftable clutch member having an internal gear and a sleeve whereby it is mounted on said shaft and having driving connection therewith, a plurality of sleeved gear members, either of which is adapted to co-operate with the internal gear of said shiftable clutch member, and means for driving said gear members singly, substantially as set forth.

871,237. Shock Absorber for Vehicles. Duncan Robinson, Brookline, Mass. Filed Dec. 12, 1906. Serial No. 347,458.

1. In a shock absorber for vehicles, the combination of a circularly movable spring controlled ring connected with the running gear, a pair of volute springs attached thereto at opposite sides of its center, and means connecting the outer ends of said springs with the vehicle body, substantially as described.

871,297. Vehicle Wheel. Nicholas Schenk, St. Louis, Mo. Filed June 29, 1906. Serial No. 324,066.

1. A vehicle wheel comprising a hub, a rim, inflated tubes located between the hub and the rim and roller bearings between the tubes, substantially as specified.

871,320. Carburetter. Leon Bollee, Le Mans, France. Filed Aug. 3, 1903. Serial No. 168,007.

1. A vaporizer for liquid hydrocarbons, comprising a number of hydrocarbon inlets, a separate air inlet to each hydrocarbon inlet, a common outlet pipe and means for cutting off one or more of the pairs of hydrocarbon inlets and air inlets simultaneously as described.

871,329. Shock Absorber for Motor Cars. Arthur Dutrieux, Le Quesnoy, France. Filed July 16, 1906. Serial No. 326,471.

1. In combination with the supporting spring and body of a vehicle, a sector shaped chamber on said body, a swinging pallet in said chamber having a number of passages therein, a yielding plate secured to said pallet near its center of movement and provided with holes opposite some of said passages but closed opposite others, and means connecting said spring to said pallet whereby the latter is caused to swing in correspondence with the bending of the former, substantially as described.

871,351. Resilient Vehicle Wheel. Chas. J. Malings, Elyria, Ohio. Filed July 30. 1906. Serial No. 328,302.

1. A resilient vehicle wheel, consisting of a hub and rim portion provided with a series of guide lugs, and a series of telescoping spring-resisted spokes pivotally mounted and secured within said guide bars.

871,404. Tire. William A. Heller, Akron.



Ohio. Filed Feb. 9, 1907. Serial No. 356, 587.

1. The combination with a wheel of a pneumatic tube arranged on the rim thereof and a casing arranged to inclose said pneumatic tube, said casing comprising a bottom or tread portion, a side portion formed integral therewith, a side portion detachably secured to said tread portion and consisting of a number of independent plates, ears formed on said detachable plates and on the integral side plate, lugs formed on the rim of said wheel and pins passing through said ears and between said lugs, substantially as described and for the purpose set forth.

871,460. Rim for Vehicle Wheels. Ernest D. Valentine, Akron, Ohio. Filed Aug. 17, 1906. Serial No. 331,048.

A separable rim for vehicle tires comprising as one of its elements an annular band of suitable width, provided along one side with tire engaging means and further provided with a relatively wide shallow rabbet in its outer surface, a plurality of pins positioned within said rabbet and extending outwardly therefrom a distance not exceeding the depth of said rabbet, a second element arranged to co-operate with said first element to constitute in connection therewith a tire retaining rim consisting of an annular band having a tire engaging means along one side with a rabbet cut in its under face corresponding in contour and size to the rabbet in said first element and adapted of fit therein, said second element being further provided with a plurality of slots formed in the rabbeted portion thereof, said slots being partially obliquely and partially circumierentially formed and so positioned as to receive the pins on said

first element and form a detachable interlocking engagement therewith, and a threaded pin arranged to engage in a threaded opening in said first element, said pin being provided with a projecting end arranged to enter an opening appropriately positioned in said second element whereby said elements are secured against unintentional dislodgment.

871,464. Carburetter. Carl C. Walter, Philadelphia, Pa. Filed Sept. 7, 1905. Serial No. 277,373.

1. A carburetter provided with a fluid fuel feeding piston and its cylinder, an air valve having a stem provided with a retarding piston, a cylinder co-operating with the end of the valve stem and having connections to the first mentioned cylinder, a cylinder co-operating with the retarding piston, and means for creating variable pressure in the last mentioned cylinder, substantially as described.

871,481. Vehicle Wheel. Richard F. Corwin, Grand Rapids, Mich. Filed Oct. 22, 1906. Serial No. 340,103.

1. In a vehicle wheel, a metallic casing open at the inner periphery and having flanges projecting inward and small bolts passing through them, a felly between said flanges and having large holes therethrough to receive the small bolts, a pneumatic tube within the inclosure formed by the felly and the metallic casing, and an intermediate fabric casing woven of elastic warp and non-elastic woof and placed around the pneumatic tube within the metallic casing.

871,506. Resilient Tire. Isaac W. Hodgson, Minneapolis, Minn., assignor of one-half to Edgar J. Hodgson, Minneapolis,

Minn., and one-fourth to Philip W. Herzog, St. Paul, Minn. Filed Oct. 12, 1906 Serial No. 338,652.

1. A resilient tire comprising an inner rim, a plurality of tread sections, links arranged in a plane approximately parallel to the plane of the connected tread sections and yieldingly connecting the tread sections in an endless series around said rim with freedom for movements in the plane of the wheel and transversely thereof, and a multiplicity of coiled springs compressed between the said rim and tread sections and exerting outward pressure thereon, substantially as described.

871,515. Vehicle Wheel. William C. Mullen, Pomona, Cal., assignor of one-half to John A. Henjum, Pomona, Cal. Filed June 19, 1906. Serial No. 322,471.

1. The new or improved vehicle wheel consisting of a hub, spokes, felly and inner tire, said tire having radial tubes screwed into and firmly held herein, an outer metallic tire whereinto radial and inwardly projecting pins are fastened, part of each of which pins pass through each of the said tubes, and the outer part of which pins pass through soft india rubber pads situated between the inner and outer metallic tires, the inner end of each pin being provided with screw nuts for securely fastening the outer tire, the inner tire, the felly, and pads together, the outer tire having a casing of soft vulcanized india rubber incasing it on the tread and at the edges, and held in place by tension wires passing circularly through the soft india rubber casing, substantially as hereinbefore described.

871,575. Tire Protector. William T. Dorgan, Peoria, Ill., assignor to William J.



Detroit's New Hotel



Automobile Headquarters

Woolley & Chittenden, Managers

The Largest Automobile Supply House in America

The Miller Speedmeter

The Miller Speedmeter is the simplest and most compact, durable and accurate speedmeter on the market. It works on the principle of centrifugal force. The entire governor mechanism is constructed from tool steel. It is arranged for adjusting the tension of springs at all speeds, and with this special constructed governor and spring adjustment, the springs are made and adjusted to show all speeds with absolute accuracy.

Rate of Speed—We wish to call particular attention to the fact that the Miller Speedmeter will register correctly at a low rate of speed, and the hand does not bob around or fluctuate when running at slow speed.

Flexible Shaft—The flexible shaft used in this instrument is made from tool steel and each link hardened separately before assembling. The cost of this shaft is more than four times that of the wire shafts generally used.

Driving Gazza—The Miller Speedmeter is fitted with crown gears with

Driving Gears—The Miller Speedmeter is fitted with crown gears with an universal attachment, which permits of the instruments being attached to any style of car on the market.

Distance Traveled—The Miller Speedmeter is fitted with an odometer, which registers the distance traveled in miles. and has total and trip dials. Finish—The material, workmanship and finish of the Miller Speedmeter is not excelled, if equalled, by any other speed indicator on the market. Each instrument is carefully tested on a special constructed testing machine before leaving the factory, and

Is Guaranteed for One Year.—The price of the Miller Speedmeter complete, including odometer, with dial registering 60 miles per hour, \$50.00.

AGENTS WANTED EVERYWHERE—We give a large discount to manufacturers, jobbers, agents and dealers in automobile supplies.,
Manufactured by the MILLER SPEEDMETER CO. (Incorporated),
15 Herman Street, Worcester, Mass.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 406 Erie St.

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 227 ½-229 Jefferson Av. Buffalo, N. Y., 824 Main St.

Wiskes and Arthur D. Eddy, Saginaw, Mich Filed Feb. 11, 1907. Serial No. 356.841.

1. A tire protector comprising a sheath of suitable material, approximately semicircular in cross section, the edges of said sheath being formed with a bead of elongated cross section, said bead being curved on its inner surface and adapted to grip the tire with the edge of the bead.

871,632. Internal Combustion Engine. Arthur Rollason, Long Eaton. England. Filed May 2, 1907. Serial No. 371,520.

1. In a six-stroke cycle internal combustion engine having an additional scavenging valve, a combustion chamber or clearance space having part thereof placed towards one side of the cylinder out of line with the piston and inlet valve, substantially as described.

871,636. Means for Cooling Heated Surfaces. James H. Sager, Rochester, N. Y. Filed Jan. 19, 1905. Serial No. 241,906.

1. In a cooling device the combination with the body to be cooled, of ringlike flanges, encircling said body and attached thereto, at intervals, each of said flanges having one or more perforations that register with those in the adjacent flanges, and also having tubes around said perforations in an adjustment flange.

871,678. Steering Gear. David M. Dearing, Jackson, Mich., assignor of one-half to Louis F. Boos, Jackson, Mich. Filed Fcb. 19, 1906. Serial No. 301,892. Renewed April 1, 1907. Serial No. 365,858.

1. A steering gear for vehicles comprising a frame having a reach bar thereon, a front steering axle, a pivoting and cushion ing device for said axle upon the front of said reach bar, a guide and a semi-circular bar engaged with said guide and having its ends connected to said axle at equi-distant points from its pivot.

871,741. Double Carburetter for Explosive Engines. Thomas L. Sturtevant, Quincy, and Thomas J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company. Portland, Me., a Corporation of Maine. Filed March 14, 1907. Serial No. 362,313

1. The combination with a plurality of carburetters or vaporizers, of a union having an outlet and provided with a chamber and with separate passages leading from said carburetters to the chamber of said union, and a valve in the said chamber of said union, said valve having separate passages therethrough and being adapted to be moved to different positions to cause the outlet passage from the chamber of said union to be placed in communication with either or both of the said passages from the carburetters.

871,753. Variable Speed Driving Mechan ism. Nils Christenson, Lynn, Mass., assignor to Calvin B. Tuttle, Lynn, Mass.; Anna M. Tuttle and Helen M. Marsh administratrices of said Calvin B. Tuttle, deceased. Filed Feb. 25, 1904. Serial No 195,156.

1. The combination with a driving and driven member, of a friction clutch, the clutch comprising non-fluid members, carried by the driving and driven members respectively, and means actuated by the driving member and at a speed lower than the speed of the driving member and means to operate said first means for causing a frictional engagement of the non-fluid clutch members.

871,775. Muffler. Frederick C. Blanchard and Ernest B. Crocker, Bridgeport. Conn., assignors to The Consolidated Safety Valve Company, a Corporation of Connecticut. Filed July 22, 1907. Serial No. 384,898.

1. In a muffler, a shell provided with an inlet and an outlet and a muffling element, inclosed in and substantially filling the shell, consisting of layers of apertured sheet metal laid parallel to the course of gases passing from the inlet to the outlet and formed with shelves standing out at an angle from the layers of sheet metal.

871,792. Turbine Engine. William J. Francke, Bridgeport, Conn. Filed March 5, 1907. Serial No. 360,664.

1. In an elastic fluid turbine, a casing having inlets and an exhaust, a wheel carrying peripheral buckets, and return buckets of U-shape adjustably secured to the casing sides and disposed to have one end lie adjacent said first named buckets.

871,811. Pneumatic Cushion. William C. McCullough, Bucyrus, Ohio. Filed July 13, 1906. Serial No. 326,129.

In combination with a vehicle axle and a body supporting spring, the herein described cushioning device comprising the pair of holders, each having an integral projection on its outer side, at its center, formed with an attaching flange, one of said attaching flanges secured on the axle and the other secured to the center of the under side of the spring, one of said holders having end guide lugs provided with guide openings, and the other having projections operating in said guide openings, and a cushioning body between the said holders.





WANTS AND FOR SALE

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

W ANTED—Traveling salesman, experienced in selling large cars. Territory east of Pittsburg. Give reference and experience. Address N. M., Box 649, New York City.

FOR SALE—Model K Cadillac runabout, excellent condition, complete with top, lamps and generator. THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

FOR SALE—Absolute closing out sale of the largest stock of new and second-hand automobiles in the United States. Write for Clearance Sale List No. 21. Now is the time to buy. ROCHESTER AUTOMOBILE CO., Jos. J. Mandery, Prop'r., Rochester, N. Y.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON. 1200 Niagara St., Buffalo, N. Y.





THE CHANDLER CO.

Name Plates and Stampings springfield, mass.

THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO. (Estab. 1851) INDIANAPOLIS, IND.

"Firestone"

SIDE-WIRE SOLID MOTOR TIRES
THE WORLD'S STANDARD
FIRESTONE TIRE & RUBBER CO., Akron, Ohio

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE



SIMPLE AND ABSOLUTELY AIR TIGHT

Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 21/2 inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York



A NEW SENSATION

Equip your car with

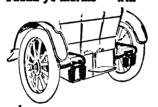
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch, 52 West 67th Street



START THE YEAR RIGHT



You will thereby derive much more pleasure and must less ignition trouble than is possible by the use of any other

More than half a million units in satisfactory operation.

C. F. SPLITDORF NEW YORK Walton Ave. & 138th St.

"RAJAH" SPARK PLUCS

ICNITION ABSOLUTELY SURE

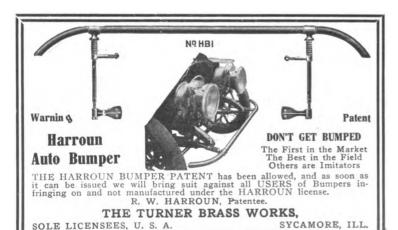
RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.

Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. [We do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. [It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. [A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. [It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. [Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind.



IF YOU ARE INTERESTED IN MOTORCYCLES

The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET. NEW YORK

\$2.00 Per Year

Specimen Copies



MOTOR MAKERS



made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

The western motor co., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

OUR LEADERS:

Kinwood Portection Radiators

Kinwood Mechanical Ollers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc. Large facilities and dependable deliveries.

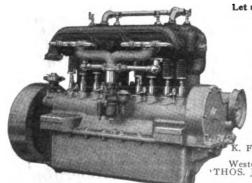
K. FRANKLIN PETERSEN. 166 Lake St., Chicago, Western Representative.

THOMAS J. WETZEL, II Warren St., Now York, Eastern Representative.

THE KINSEY MFG. CO., Dayton, Ohlo.



CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908 THREE SIZES

THREE SIZES

4½ in. x 4½ in.
4½ in. x 5 in.
5 in. x 5 in.
5 in. x 5 in.
4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.

Our new factory and ma-chinery enable us to guar-antee quality and deliver-ies. Also clutches and transmissions. Send for

ransmissions. Send for catalogue.

K. FRANKLIN PETERSON, 166 Lake St., Chicago, Ill. Western Representative

'THOS. J. WETZEL, 29 W. 42d St., New York. Eastern Representative.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.

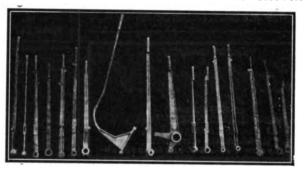
PACKARD **Enameled Ignition Cable**



is the choice of the most discriminating buyers. Our new MULTIPLE LOW TENSION CABLE is a new feature. It greatly improves the wiring of any multi-cylinder engine. Samples and prices on request.

THE PACKARD ELECTRIC CO., Warren, O.

PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM CRAMP & SONS SHIP ENGINE BUILDING COMPANY, Philadelphia, Ponna.

AUTOMOBILE BODIES

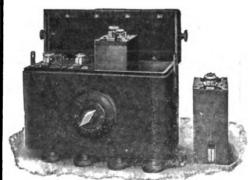


TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Facine, Wis.



HEINZE

Send for 1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

INSURE YOUR MOTOR

Against wear and carbon troubles by using



"INVADER"

TWO GRADES-LIGHT AND MEDIUM HEAVY YOU NAME THE CAR—WE'LL NAME THE GRADE

INVADER SEMI-FLUID COMPOUND thickened oil for transmissions

INVADER LUBRICATING COMPOUND For Compression Cups

CHAS. F. KELLOM & CO.

128 Aroh Street, PHILADELPHIA

"They're specifying

TIRES 1908 Cars."

CONTINENTAL CAOUTCHOUC COMPANY 43 Warren Street, New York Representation everywhere.
"Keep your eye on Continentals"

TALY AMERICA

MICHELIN TIRE CO..

Militown, N. J.

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write us APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, ind.

EISEMANN-LAVALETTE Magnetos

LAVELETTE & CO., 112 W. 42d St., New York

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y. Water St.



For catalogues, address
THE CONTINENTAL AUTO MFG. CO.



"The Pullman of Motor Cars" 1908 Models Ready for Dolivery RAINIER MOTOR CAR CO., Broadway and 50th \$t., New York

TRUFFAULT-HARTFORD SHOCK ABSORBER Mark

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.
Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO., E. V. Hartford, Pres. 66 Vestry St., New York



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, "07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., aridgeport, Conn.

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St.

CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.
FOBES AUTO SUPFLY CO., Portland, Oregon.
FOBES AUTO SUPPLY CO., Seattle, Washington.
WAITE AUTO SUPPLY CO., Providence. R. I.

BOSTON—292 Devonshire Street.
BUFFALO—9 West Huron Street.
DENVER AUTO GOODS CO., Denver, Colo.
PENN AUTO SUPPLY CO., Philadelphia, Pa.

CIMIOTTI GARAGE

New Yerk Oity

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try us.

Tel. 2686 River.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

LASCOCLAS FRONT.
Simple, effective, correctly designed Mahogany finish wood frame, trimmed in brass, 3-16 crystal plates, steel stay rods, bottom of frame shaped to dash of any standard automobile. Can be attached easily and quickly,
We make the London Topa. Write for details and prices.

LONDON AUTO SUPPLY CO.
1233 Michigan Avenue CHIC CHICAGO

AJAX YRAPPED TIRES **GUARANTEED FOR** 5,000 MILES RIDING Write for copy of Guarantee-Dept. A.

AJAX-GRIEB RUBBER CO., General Office, 57th Street and Broadway, New York.
AGENTS IN ALL LARGE CITIES.

BRISCOE RADIATORS

Honeycomb, Flat Tube, Round Tube, Staggered Tube, Film Tube; horizontal or vertical flow; with or without casing; with or without pump. Fenders, Tanks, Hoods also made. Send for catalog.
Old Radiators Repaired. Send to nearest factory.

BRISCOE MFG. CO. MICH. NEWARK, N. J. DETROIT, MICH.



The Baldwin Chain Company

- MAKE -

Baidwin Chain & Mfg. Co., Worsester, Mass., U.S.A.

Logan 1908 Model S Three Ton Truck

A truck equipped with a four cylinder water cooled 40 H. P. motor, built to give service month after month and year after year, and representing the best thought of the oldest and largest plant in America devoted to the manufacture of commercial motor cars. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE, OHIO.





\$375 and Upwards

The automobile for winter use. Air cooled no pipes to burst. Solid rubber tires—no unctures. Strong, powerful, durable, reliate. Double cylinder—9-10 H. P. Economipunctures. cal in gasoline consumption. sition for automobile dealers. A good propo-

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Bex No. 250 AUBURN, IND.



"VULCAN" Sta-Rite Spark Plugs

"KEEPS THE LID ON."

On Maxwells, Mitchells, Autocars, Americans, Glides, etc., in their contests. They'll do the same for you.

Send for sample set.

THE R. E. HARDY CO., 86 Water St., New York City



inates Useless Experiments for "Talking Points." Studebaker Autemobilo Co., South Bend, Indiana

Address Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City. Western Inquiries ariord Motor Car Co. of Cleveland 1372 East 12th St., Cleveland.

Acetylene Gas and Oil ATWOOD MFC. CO., Amesbury, Mass.



SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies SPRINGFIELD** METAL BODY CO.,

366 Birnie Ave., Springfield, Mass.



A.O. SMITH CO.

High-Grade



Pressed Steel Frames

Steering Columns

Transmissions

Steel Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street,

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON "No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO.,

Jackson, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.

ALUMINUM BODIES J. M. QUINBY & CO. **EST. 1834** Carriage Builders, NEWARK, N. J

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.



STANDARD ROLLER BEARING COMPANY PHILADELPHIA

Manufacturers of Steel, Brass and Bronze Balls, Ball Bearings, Roller Bearings and Automobile Axles. Write for new automobile catalogue with full par-ticulars of

THE STANDARD TRANSMISSION AXLE.

RANKLIN MOTOR CARS LIGHT-WEIGHT, HIGH-POWER

\$250 "SUCCESS" AUTOMOBILE

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Co., Inc. 531 De Balivero Ave., St. Louis, Me

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

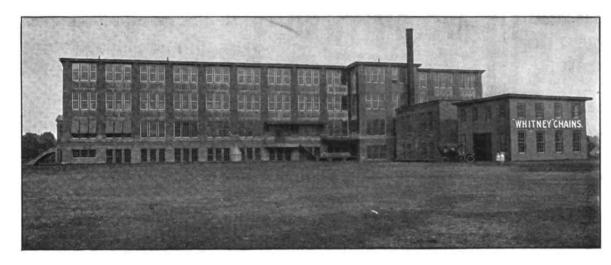
THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street. New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of

Name_

Address



We are now well settled in our

New Factory and

READY TO SHOW RESULTS

Prompt Delivery and Constant Improvement in Quality

In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

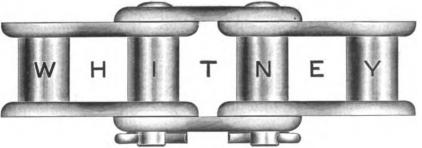
We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.





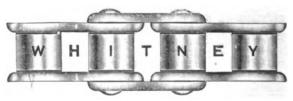
We carry 95 regular Sizes of keys and cutters in stock for immediate delivery

"Whitney" Detachable Bushing Chain—Patented



Bushing Chains are like Roller Chains-Without Rolls

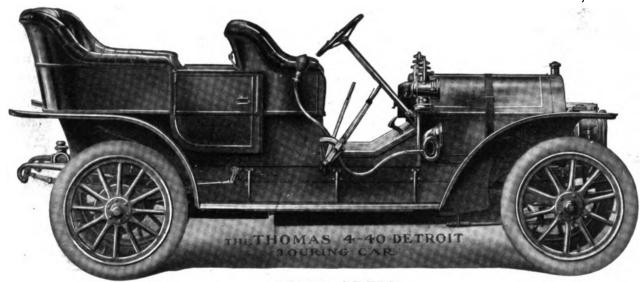
Roller Chain



The Whitney Mfg. Co. Hartford, Conn.

THOMAS 1908

A complete line of Motor Cars of the highest quality possible in Design, Material and Workmanship. They will do what you wish your car could do



PRICE, \$2,750

Thomas 4-20 Towncar

The original Towncar, designed for City and Suburban use exclusively. Beautiful bodies, quiet operation; low cost of maintenance. The Society Car.

Thomas 4-40 Detroit

Best of all shaft-drive cars. In power, speed, hill-climbing, and reliability the Thomas Detroit leads the five passenger class.

Thomas 4-60 Flyer

Winner of hundreds of contests of speed, hill-climbing, reliability, and endurance. Has more records than any American car. This year improved, enlarged, and refined.

Thomas 6-70 Special

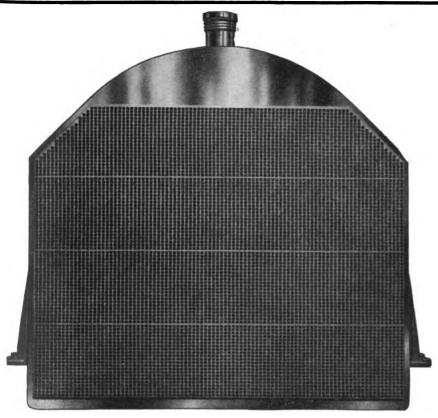
The six-cylinder model of the Thomas Flyer, built by America's pioneer six-cylinder builders. The greatest car in America in speed, size, reliability and refinement.

Thomas Cars Succeed

E. R. THOMAS MOTOR COMPANY

Member A. L. A. M.

Buffalo.



¶ It's not what we say, but what Mayo Radiators have done, that has led to their adoption by America's best cars.

¶"What's worth doing at all is worth doing well," is the policy on which Mayo Radiators were built and will continue to be built.

Largely increased facilities enable us to take on a few new customers of the kind that place quality before price.

(The Mayo Radiator is The Quality Radiator.

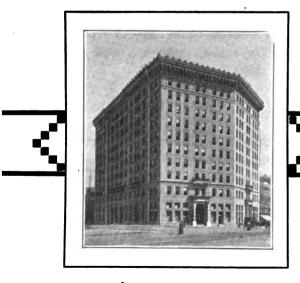
If you are a Quality Maker better write us at once.

HONEYCOMB, CELLULAR OR FLAT TUBE TYPES.

MAYO RADIATOR COMPANY, New Haven, Conn.

Hotel Pontchartrain

Detroit's New Hotel



Automobile Headquarters

Woolley & Chittenden, Managers

THE BEST WAY
TO FIND A GOOD
THING IS TO LOOK
FOR IT × WE HAVE
AFIND IN THE
AURORA MOTOR WORKS
AURORA—ILL
AURORA—ILL

The Easiest Riding Car in the World

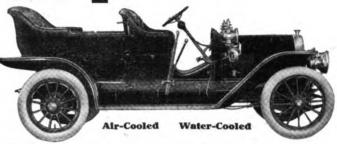
"A Mechanical Masterpiece"

The woman who once experiences the delightful ease of motion, the immunity from exhaustion, found only in the Marmon Car, will not easily be satisfied with anything else.

The motorist who is impressed, as he should be, with marked mechanical excellence, will find in the Marmon a score of other potent reasons—and they are reasons not to be found in any other car, foreign or domestic.

Investigate it, test it on the road before buying any motor car. Wisdom demands this much, at least.

Model H. Touring Car, 40-45 H. P., \$3500 3500 Model H. Roadster, 40-45 H. P., 3000 Model G. Touring Car, 35-40 H. P.,



For catalog, address Dept. 16

Nordyke & Marmon Co., (Estab.) Indianapolis, Ind.

Boston, Mass., F. E. Wing Motor
Car Co., 12 Columbus Ave.
Philadelphia, Pa., Brazier Auto
Works, 38th and Market Sts.
Baltimore Md., Snodeal Automobile
Co., 2552 Madison Ave.
East Orange, N. J., Ruckey Machine
Co., 02 Eaton Place.
Mitwaukee, Wis., John Ure, Jr., &
Co., 172 12th St.
Indianapolis, Ind., H. T. Hearsey
Vehicle Co.

St. Louis, Mo., Van Automobile Co. 1700 Washington Ave.
Pittsburg, Pa., Pennsylvania Auto Co., Hay St. and Knight Ave. Wilkinsburg.
Waterloo, N. Y., Waterloo Automobile Co., Binghamton. N. Y., Heller-Spawn Motor Car Co.
Los Angeles, Cal., C. S. Anthony, 110 East 9th St.

Desirable Territory tor Dealers.

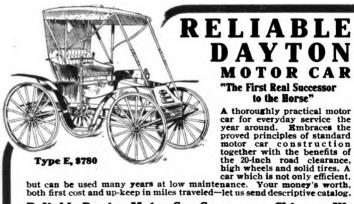
Note List Above

Itudebaher

Not "occasional good ones," but uniform excellence.

Two 30's and a 40 H. P. Various types of bodies.

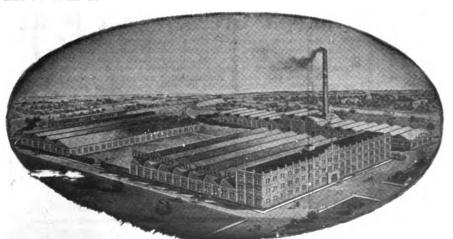
Studebaker Automobile Co. South Bend, Ind.



RELIABLE DAYTON MOTOR CAR

"The First Real Successor to the Horse"

Reliable Dayton Motor Car Co., Dept. 14, Chicago, Ill.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park CLEVELAND, OHIO, U.S.A.

Digitized by Google

One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being ob-That was ourselves. But, unforserved. tunately, we sold to the jobber also - and the iobber cut the price.

Then there was fun in the camp. That hurt us - it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that

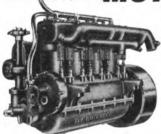
hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co. 108 Wheeler Ave., Beloft, Wis.

MOTOR MAKERS



made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

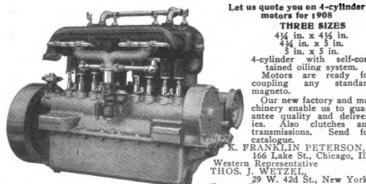
The "Rutenber" Carburetor

which as motor experts we picked as the best in the world. we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO.. Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

CONTINENTAL MOTORS ARE STANDARD



THREE SIZES 4¼ in. x 4½ in.
4¼ in. x 5 in.
5 in. x 5 in.
5 in. x 5 in.
4-cylinder with self-contained oiling system.
Motors are ready for coupling any standard magneto.
Our new factors and

Our new factory and ma-chinery enable us to guar-antee quality and deliver-ies. Also clutches and transmissions. Send for

transmissions. Send for catalogue.
FRANKLIN PETERSON, 166 Lake St., Chicago, Ill. rn Representative.
J. WETZEL, 29 W. 42d St., New York.

Western Representative THOS. J. WETZEL, 29 W. 42d St., Eastern Representative.

CONTINENTAL MOTOR MFG. CO.. Muskegon, Mich. The Largest Automobile Supply House in America

Pan-American **Automobile Body Polish**

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches, leaves the automobile with its original new lustre, without being sticky or greasy.

It can be used on the leather seats or tops with the very best results. Can be used on any color or kind of varnish, from the clearest white to the darkest black.

Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all automobile dealers. Price, 60 cents per bottle.

Catalog, largest of the kind, mailed on request.

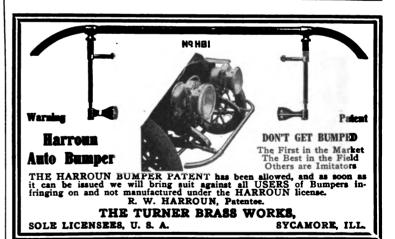
CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE:

97-99-101 Reade St., New York City

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 22734-229 Jefferson Av., Buffalo, N. Y., 824 Main St.



Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. [We do not imitate any one, nor follow any other maker's plana. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. ¶A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and genewing every few days, and leaves the machine clean and not all grease when through using it. ¶It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. ¶Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind.



The Heavier the Load the Greater the Saving

The first cost of TIMKEN equipment for Commercial Vehicles is out of all proportion to the resultant saving in up keep and increased earning power through added carrying capacity.



2-INCH I BEAM AXLE, TIMKEN ROLLER BEARINGS AND HUBS

illustrated above, is especially designed for vehicles doing heavy duty. This Axle is fitted with TIMKEN ROLLER BEARINGS in the knuckle head, making steering, even under the full load carrying capacity, easy and simple—is forged out of heat treated steel and equipped with TIMKEN ROLLER BEARINGS in the hubs.

TIMKEN ROLLER BEARINGS are especially designed to carry as much end thrust as radial load—both principle and construction providing for an evenness of wear that does not impair or destroy in any manner the characteristics of the bearings. This is the TIMKEN principle distinctive and individual—and cannot be found in any other type or form of anti-friction bearings.

And that is the reason WHY the Successful Commercial Vehicle Builders use them. Facts and figures on reduced cost of operating and maintenance for the asking.

The Timken Roller Bearing Axle Company,

Canton, Ohio

BRANCHES-10 E. 31st St., New York. 429 Wabash Ave., Chicago.

The Car of Steady Service

as applied to the



is more than a mere phrase, it is a title earned through correct design and careful construction and proven by years of hard, constant service wherever power-driven vehicles are known.

The practical qualities that established the Rambler reputation are,-

- 1st—APPLIED POWER. By this we mean actual tractive force as applied to the road wheels. Owing to the straight line drive of the four-cylinder models and the direct chain drive in the two-cylinder cars, Ramblers have greater propelling force per pound than any other car on the market.
- 2d—DEPENDABILITY. Ramblers are built to stand the test of hard, daily service over the worst of American roads. This condition is not reached by mere weight and masses of metal, but by simple, scientific construction in which each element is stronger than the strains upon it can ever require.
- 3d—PRACTICAL ROAD VALUE. With the vast facilities of an enormous plant like the Rambler factory, skillfully directed to the production of two models only, greater value per dollar can be offered than is possible in a plant of lesser output.

In short, the Rambler is a car of

Power, Service and Value

Ordinary business policy dictates a careful examination of its many high qualities before ordering your new car.

Our 1908 catalog fully describing two touring cars and a high-powered roadster is at your service: write to-day.

Thomas B. Jeffery & Company

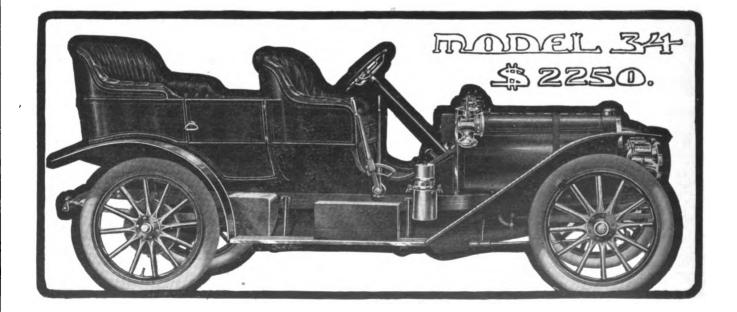
Main Office and Factory, Kenosha, Wis.

Branches and Distributing Agencies

CHICAGO BOSTON

MILWAUKEE PHILADELPHIA

SAN FRANCISCO



COODHUE KNOX'S NEW PRESIDENT

Creditor-Stockholders Choose Chicopee
Banker to Succeed Cutler-Reorganization is Now Complete.

The reorganization of the Knox Automobile Co., Springfield, Mass., finally was completed on Saturday last, 1st inst., when the officers selected by the committee previously appointed by the preferred stockholders—all of whom are creditors who accepted stock in payment of their claims—were formally elected by the new directors of the company. They are as follows:

President, Charles L. Goodhue; vice president, William E. Wright; secretary, Charles H. Beckwith; treasurer, Charles L. Goodhue; assistant treasurer, Albert E. Smith.

The directors, who previously had been chosen at a meeting of the stockholders, are as follows: Alfred N. Mayo, Charles L. Goodhue, Charles H. Beckwith, Peter Murray and Clarence E. Whitney, representing the creditors, and William E. Wright, W. H. Chase, M. J. Greenwood and H. W. Cutler, who represent the common shareholders who constituted the old company.

Charles L. Goodhue, the new president and treasurer, is a retired banker, who is a director of the Chicopee National Bank. It is known that E. H. Cutler, the former head of the company, earnestly desired reelection, but he was unable to muster sufficient support and so passes out of the concern's affairs. Messrs. Wright and Smith are the only representatives of the Cutler regime who were retained.

The Knox Automobile Co. assigned on July 22, 1907, with \$975,000 assets, and \$531,000 liabilities, and since that date has been in the hands of Alfred N. Mayo, the assignee. On December 1, the assignee issued \$500,000 preferred stock, which was

accepted by the creditors in full satisfaction of their claims. The preferred stock controls the assets and income of the company.

The reorganization of the concern was effected chiefly through the tact and ability of Assignee Mayo, who is treasurer of the Fisk Rubber Co.

Receivers for Coleman's Battery Company.

As a result of a petition in a suit in equity brought by Emma Coleman of Somerset, Va., George F. Keating and Edward R. O'Malley were, on Monday last, 3d inst., appointed receivers of the National Battery Co., of Buffalo, N. Y. The liabilities of the company amount to about \$120,000. The assets are estimated at \$425,000. The National Battery Co. was one of the relics of the long-defunct American Bicycle Co., or "bicycle trust," as it was better known, of which R. Lindsay Coleman, of New York City and Somerset, Va., was once president. When the trust went to smash, Coleman obtained possession of the Buffalo battery concern, of which he became president. He occupied that office until comparatively recently, when the title of chairman of the board of directors was created for him.

Bonebrake Plans Factory in Kansas.

The Bonebrake Hardware Co., which operates a string of stores in Oklahoma, with headquarters in El Reno, is planning to enter the automobile industry as a manufacturer. The first that was known of the matter was when Mr. Bonebrake entered into negotiations with the Chamber of Commerce of Wichita, Kan., with a view of obtaining a factory site in that city. The project does not appear to have advanced beyond that stage.

Cameron Buys Plant at Beverley.

The Cameron Motor Car Co., of Brockton, Mass., have purchased the brick factory of the Beverley Mfg. Co., Beverley, Mass., and is preparing to take possession at once. An output of 500 cars is in view for the 1908 season.

TRYING TO REVIVE THE TRIDENT

Undeterred by Personal Judgment, President Freeman strives to Secure Capital—Alluring Offer to Investors.

In the New York Supreme Court the Niagara Rubber Co., Lockport, N. Y., was last week awarded judgment for \$7,500 against Albert Freeman, president of the Trident Tire Co., New York, who had bound himself personally to secure the contract entered into by the two concerns. It appears the Niagara company was engaged by the Trident people to make their tires, the New York concern agreeing to pay for the material, and also to pay 15 per cent. for the use of the machinery, the full amount of the labor and 25 per cent. profit to the makers.

The Trident company started with a splurge, but made no headway, and judgments have been piling up against it. Mean while, Albert Freeman, its president, is circularizing investors in an effort to obtain money to revive the company. His circulars set forth that he is interested in a "pneumatic tire which will revolutionize the tire industry," investment in which will be "not only guaranteed by a 6 per cent. first moragage gold bond, but that the stock, that you will receive as a bonus with the bond, will yield you an additional income of at least from 30 to 40 per cent. per annum."

Dry Cell Makers Decide to Quit.

The Ampere Manufacturing Co., makers of dry batteries, at 408 West Thirteenth street, New York, has applied, through its directors, Leopold Polock, president, and Nathan Friedman, treasurer, to the Supreme Court for a voluntary dissolution of the corporation, which was incorporated March 28, 1907, with a capital stock of \$5,000. To wind up its affairs Marcel Levy has been appointed receiver, with a bond of \$2,000. The liabilities are \$1,727 and assets \$1,283.

Boston, Mass.—Crown Motor Vehicle Co., under Massachusetts laws, with \$50,000 capital. Corporators—W. A. Shafer and F. Dodge.

THE WEEK'S INCORPORATIONS.

Wilmington, Del.—Motor Omnibus Co., The, under Delaware laws, with \$45,000 capital. Corporators—H. L. Rice, E. S. Hellings, W. M. Pyle, Wilmington.

Chicago, Ill.—Parsons, Curtis & Co., un der Illinois laws, with \$10,000 capital; to deal in automobiles. Corporators—C. H. Parsons, A. W. Curtis, and F. A. Bean.

Boston, Mass.—Graham's Automobile Spring & Appliance Co., under Massachusetts laws, with \$50,000 capital. Corporators—J. A. Watson, president; J. A. Watson, treasurer.

Auburn, Ind.—McDowell Motor Vehicle Mfg. Co., under Indiana laws, with \$20,000 capital; to manufacture automobiles. Corporators—Willis McDowell, Wheeler McDowell, and A. W. McDowell.

New York City, N. Y.—P. & H. Tire Co., under New York laws, with \$20,000 capital. Corporators—Roger G. Howell and Edward Tabor, 1657 Broadway; Paul M. Pelletreau, 3 Broad street, New York City.

New York City, N. Y.—General Taximeter Co., under New York laws, with \$5,000 capital. Corporators—Alfred Ely, 37 Madison avenue; James T. Riddle, 246 Manhattan avenue; Robert S. Kearney, 31 Nassau street, New York City.

Hutchinson, Kan.—Taylor Motor Co., under Kansas laws, with \$10,000 capital; to maintain garage and deal in automobiles. Corporators—Dr. H. G. Welsh, T. J. Templar, L. A. Bunker, H. H. Taylor, and W. Y. Morgan.

New York City, N. Y.—Comet Motor Trucking Co., under New York laws, with \$150,000 capital. Corporators—Leslie B. Sanders, 165 West Eighty-second street; Arthur W. Harrell, 503 West 148th street; Otto Bluhm, 23 Liberty street, New York City.

New York City, N.Y.—Wyatt & Listman, under New York laws, with \$4,000 capital; to make automobile parts. Corporators—James M. Wyatt, Hotel Gregorian; John B. Haskin, 34 West Eighty-sixth street; Herbert E. Listman, North Arlington avenue, East Orange, N. J.

New York City, N. Y.—Marko Storage Battery Co., under New York laws, with \$5,000 capital; to make storage batteries. Corporators—Paul M. Marko, 1231 Bedford avenu; Herman Matfield, 207 Troy avenue, Brooklyn; Charles Standt, 517 Angelique street, West Hoboken, N. J.

Woman Starts Cut Rate Repairing.

Enter the cut-rate repair lady! According to advices from Trenton, N. J., she is Mrs. Clark Fisher, widow of a wealthy anvil maker, who attracted attention two years ago by assuming control of her deceased husband's large business and increasing it to almost double its former volume through

THE MOTOR WORLD

her personal efforts. Her latest departure has caused Trenton garage owners to prick up their ears by the announcement that she will devote a portion of her immense plant to the repairing of automobiles at cut prices.

Mrs. Fisher declares that she has been prompted to do this because of the exorbitant prices she has been obliged to pay, both in this country and abroad, for the slightest repairs to her car. She believes that the garage owners "have combined and are practising extortion on the automobilists."

It is this fact, she states, and also a feeling of philanthropy that has caused her to start a movement against high garage charges in Trenton, at any rate. The anvil business, having recently become slack, Mrs. Fisher was troubled about some of her employes, a few of whom have not missed work at the works for 67 years. when the plant was started. So, instead of being compelled to lay them off for a period Mrs. Fisher decided to start in the cut-rate business and keep them busy during the winter. As the plant has an abundance of machinery she is well able to begin operations at once.

The machine shop will undergo a few changes to prepare for the automobile work it is expected to receive. Harold Fisher Brooks, late of the Standard Motor Construction Co., of Jersey City, has been engaged as the head of the automobile repairing department. Trenton's garage owners have not yet been heard from, as to whether they will meet Mrs. Fisher's reductions.

Standard Sizes Adopted for Tubing.

While it was known several months ago that the mechanical branch of the Association of Licensed Automobile Manufacturers had taken up the subject of the standardization of tubing used in automobiles, the results of the endeavor was only this week made public.

The object of the research was to secure a high quality of steel with a maximum of strength and to reduce the number of sizes as much as possible so that deliveries could be more quickly made by the tube manufacturers, who have been required to supply about 1,200 sizes of steel tubes of varying diameters and thicknesses.

As the outcome of the conferences held by the leading experts of the various interests concerned, the number of sizes has been reduced to about 300. Charts have been made of these standard sizes and furnished to the draughting room of each member of the association, giving a schedule of the standard stock sizes of all steel tubing made.

The benefits to be derived from this standardization are obvious: the reduction in weight in a car, the uniformity of sizes used by the various makers, the placing on the open market of certain standard sizes for all cars and the possibility of making quick deliveries to the manufacturers, thus reducing the cost of construction.

IN THE RETAIL WORLD.

The St. Nicholas Avenue Garage, New York City, has increased its capital stock from \$10,000 to \$50,000.

The Miller Motor Car Co., which has conducted a garage at Seventh and Wisconsin streets, Racine, Wis., is preparing to enlarge. To this end a commodious one-story concrete garage will be erected on Main street.

Fire of unknown origin gutted the Lowell Automobile Co.'s garage at Appleton street and Post Office avenue, Lowell, Mass., Monday night, 27th ult. Several cars were destroyed and others damaged. The total loss will not exceed \$25,000, that to the building amounting to about \$5,000.

W. A. Richwine has withdrawn from the Hiland Automobile Co., Pittsburg, of which he has been manager since its formation, and with A. H. Sarven will form the Diamond Automobile Co. The new company will be established in East Liberty, Pittsburg, where Buick cars will be handled.

A garage will be opened at 23 Sherman street, Hutchinson, Kan., by the Taylor Motor Co., which has just been incorporated. Besides conducting a general garage business the company will handle accessories and Ford cars. Dr. H. G. Welsh is named as president and H. H. Taylor secretary and manager.

Fire in the two-story frame building at 110-114 Exchange street, Providence, R. I., January 28th, caused a loss of \$20,000, several automobile firms sustaining losses. The Flint Motor Car Co. lost several cars, and machinery valued at \$16,000. The Autocar repair shop was damaged to the extent of \$500. Among the other losers were Adams Brothers, who conducted a machine shop and J. M. Baker, a pattern maker.

More Facilities for Spring Manufacture.

Having passed through the period of financial depression without reducing their force or number of working hours, the Cleveland-Canton Spring Co., who have made extensive investigations of the merits of vanadium steel for automobile springs, have added another building to their plant at Canton, O., for the sole purpose of handling their increasing volume of orders. In the new building springs made from this material and other high grades of spring steel will be heat-treated in furnaces fitted with pyrometers especially designed for this work, securing a uniform tempering of all springs. There also will be a new testing machine installed. Incidentally, improvements have been made in the fitting of springs by the employment of a patented rolling machine which is to be used exclusively by this company.

Regal to Make Taxicabs, Too.

The Regal Automobile Co., Detroit's newest acquisition, will include taxicabs in its productions. The company has acquired a location at Beaubein and Twombly streets.



GROWTH OF AMERICAN EXPORTS

Increase of \$1,347,786 for the Year 1907-Gains in Every Geographical Division Except Mexico and Africa.

During the twelve months of the year 1907, America's export trade in automobiles increased exactly \$1,347,786. The statistics, which just have become available, show that the total business amounted to \$5,756,972, as against \$4,409,186, and \$2,695,655 for 1906 and 1905, respectively. The number of complete cars exported was 2,894, valued at \$5,120,963, leaving \$636,000 in round numbers, representing the valuation of

This upward trend has been distinguishable throughout nearly the entire world. Only two individual exceptions-those of Mexico and Africa — being observed. The falling off from 1906 in the first instance amounted to \$88,700 in round numbers, while African trading dropped only \$7,906 last year. On the other hand, the United Kingdom has shown its appreciation of the American product by purchasing over \$600,000 worth more of automobile products in the year just closed than during the year before. British North America comes second, with a growth of \$288,500, nearly, and France next in order.

During the closing month, December, 173 cars, valued at \$259,341, were exported, the total exports, including parts valuation amounting to \$301,432. The returns for December, 1906, amounted to \$242,154, the closing month of 1907 thus showing an increase in business of almost \$60,000. Eight of the divisions recognized by the Bureau of Statistics at Washington, revealed gains, the United Kingdom leading with an appreciation of \$40,000, or thereabouts, while the West Indies and Bermuda jumped up no less than \$33,000. Of the six divisions showing losses, France led with \$22,-200.. The report in detail follows:

	December		12 Months Ending December		
	1906	1907	1905	1906	1907
Cars, carriages, other vehicles, and parts of:—					
Automobiles and parts of			\$2,695.655	*\$2,356,110	
Automobiles†		\$259,341		1,792,308	\$5,120,963
Parts of		42,091		260,768	636,009
Exported to—		,	******		000,000
United Kingdom	27.647	66,808	707.045	1.138.264	1.738.488
France	30,767	8.564	269,703	336,273	596,450
Germany	4.000	5.064	105.457	132,214	175.250
Italy		12.500	163,978	251,636	255,160
Other Europe		15.921	240,379	214.119	288,211
British North America	31.613	21.791	537,588	878.885	1.167.355
Mexico	39,243	56,691	192.452	717.523	629,807
West Indies and Bermuda		44.248	151.859	240.989	293,885
South America		23,533	60.419	166.814	244,466
British East Indies		30	31.793	34.111	35,586
British Australasia		38.289	120,083	192,668	213,645
Other Asia and Oceania		7.847	63,577	79.542	99.009
Africa		146	39.288	16,100	8,194
Other countries			12,034	10,048	11,466
Total automobiles, and parts of	\$242,154	\$301,432	\$2,695,655	\$4,409,186	\$5,756,972

^{*} Figures are for six months, January to June. 1906. † Number not stated prior to July 1, 1906.

Carnival Fund Passes \$6.000 Mark.

At a meeting of the New York Automobile Trade Association yesterday, it was made known that the fund for the trade carnival which is scheduled to occur during the week of April 6th, had passed the \$6,000 mark. It has been subscribed by the New York dealers and accessory houses on a basis of \$200 each by the former and \$100 by the latter. At yesterday's meeting, Thomas F. Moore, who had been selected to manage the affair, tendered his resignation, following a motion that no money be expended without the approval and counter signature of the finance committee. Moore made a speech detailing his knowledge of the business, etc., and said he could not work to advantage under such an arrangement. Action on his resignation was deferred until the next meeting. The definite program for the carnival has not yet been arranged, although a parade with 1,000 cars in line, and a race meet are the uppermost projects.

Auxiliary Receiver for the Royal.

Judge Lacombe of the United States Circuit Court has appointed Arthur Berry auxiliary receiver for the property in New York City of the Royal Motor Car Co., of Cleveland. Ohio. The appointment was made on the application of E. W. Cottrell, of Detroit, a stockholder, and Witt K. Cochrane, of Chicago, a creditor for \$4,800. The New York assets consist of automobile parts and accounts valued at \$8,000.

Referee Accepts the Frenches' Offer.

Mr. and Mrs. Jesse French, Sr., have withdrawn their claim for \$61,287.21 against the estate of the St. Louis Motor Car Co., Peoria, Ill. The withdrawal was executed after the referee in bankruptcy had agreed to their stipulations, i. e., that a certain touring car in factory be surrendered to them and that the estate waive all claims for balances alleged to be due for unpaid stock subscriptions.

RRITISH IMPORTS AND EXPORTS

Figures for the Year Show Continued Preference for Foreign Cars-Sales to Other Countries Increased.

British imports and exports of automobile manufactures for the year ending December 31, 1907, revealed a continuance of that preference for the foreign-made article which has characterized its trade returns for some little time.

During the year no less than 4,819 cars were imported, having a valuation of \$10,-400.830, as against 5,776 cars brought into the country during the previous year, of a total value of \$12,431,685. The total figures for 1906 and 1907, respectively, including the valuation of parts, were \$21,858,300, and \$22,763,430. Exports for the year amounted in total valuation to \$6,638,490, of which \$4,301,765 represented the declared valuation of 2,322 cars, and the balance, parts. The total exports for 1906 were \$4,100,100, and for 1905, \$2,513,570.

In December, 1907, 204 cars were imported into the British Isles, of a total valuation of \$393,490, which with \$733,970 worth of parts, brought the total up to \$1,124,310. as compared with a corresponding total of \$1,110,570, for the year previous. The December imports were the smallest of the year. Two hundred and six cars, valued at \$386,975, and parts to the value of \$168,990 were exported during the same period, the total exportation of \$555,965, being lower than that of any month since August.

Traffic Department for N. A. A. M.

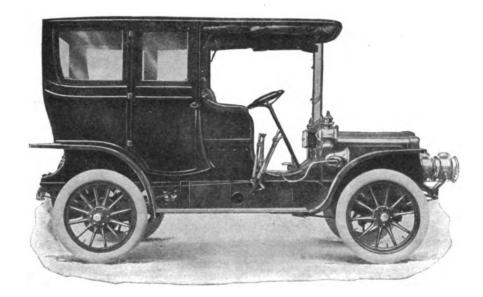
At the regular meeting of the executive committee of the National Association of Automobile manufacturers held in New York yesterday, Angus Smith, Olds Motor Works, and H. O. Smith, Premier Motor Manufacturing Co., were elected members of the executive committee to fill vacancies and F. H. Hart of the Corbin Motor Vehicle Corporation was elected a member of the association to succeed E. H. Brandt, who formerly represented the company.

The only other subject considered that was out of the regular routine was that relating to the establishment of a traffic or transportation department, which it was decided to inaugurate. It will be in charge of J. S. Marvin, who has been chief of a similar bureau in the A. L. A. M.

Thomas Henderson, Winton Motor Carriage Co., president of the association, presided at the meeting, the others in attendance being S. T. Davis, Locomobile Co.; W. R. Innis, Studebaker Automobile Co.: William E. Metzger, Cadillac Motor Car Co.; S. D. Waldon, Packard Motor Car Co.; Albert L. Pope, Pope Manufacturing Co.; Charles Clifton, George N. Pierce Co.; L. H. Kittridge, Peerless Motor Car Co.; and S. A. Miles, general manager.

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Exclusive Features of the White Limousine

The exclusive White quality of absolute noiselessness of operation is of particular advantage in a limousine because, in a car with a closed body, any noise made by the mechanism is even more noticeable and annoying than in an open vehicle.

Another exclusive White quality—namely—genuine flexibility of control, permits of the machine being guided safely and speedily through the crowded city streets. The speed of the White may be accommodated to the exengencies of street traffic without any changing of gears, jerky starts or the embarrassing and sometimes dangerous "stalling" of the engine.

As regards graceful lines and luxuriousness of equipment and finish, the White limousine must be seen to be appreciated.

Write for catalog and the address of the nearest branch or agency

THE WHITE COMPANY

CLEVELAND, OHIO

NEW YORK CITY, Broadway at 62d St. SAN FRANCISCO, 1460 Market St. PHILADELPHIA, 629-33 North Broad St.

BOSTON, 320 Newbury St. CHICAGO, 240 Michigan Ave. CLEVELAND, 407 Rockwell Ave.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche. Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . . 10 Cents Poreign Subscription \$4.00 Invariably in Advance,

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

ATChange of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

New York, February 6, 1908

Sympathy and Inhumanity.

Sympathy for the unfortunate is natural. It follows that there are those who will feel that justice was not tempered with mercy when a sentence of eighteen months' imprisonment was meted out by a New Jersey magistrate to the Newark automobilist convicted of manslaughter in having killed a pedestrian while recklessly driving his automobile, and who then hurried away leaving his victim to his fate.

That the automobilist was an educated man, standing well in the community, makes his action in running away the more reprehensible. Action of the sort is a species of inhumanity, brutality and cowardice for which written words are too poor sufficiently to express condemnation. Sympathy scarcely is merited.

The sentence of eighteen months' imprisonment is just and richly deserved. That the crime was committed without malicious intent was undoubtedly considered

by the jury who found the verdict; but that mere "lack of intent" should be accepted as an excuse for manslaughter is intolerable.

No right thinking man can fail to condemn absolutely the cowardly action of any man in leaving an injured person to his fate, and it is hoped that the stand taken by the court may be the warning of an attitude more to be feared than the possible primitive punishment which may be meted out to the man who renders every aid and shows a willingness to meet the consequences of his action rather than to hope to remain undetected by running away and brutally leaving the victim of his accident to an unknown and uncared for end. That man lacks the elements of real manhood who does that sort of thing and merits any punishment that comes to him.

Where Drivers Should be Seated.

The accounts of accidents, resulting from collisions where trolley cars and other vehicles have crashed into automobiles that have unexpectedly changed their course, have became so frequent and the fatalities so numerous that the mere assumption of carelessness on the part of the chauffeur does not appear to be a satisfactory explanation.

It is not always possible for drivers of automobiles to be aware of the approach of rapidly moving vehicles coming from behind, in time to avoid accidents, and anything that will help in giving them the opportunity of knowing exact traffic conditions at all times is of extreme importance to those who are interested in the development of motor cars.

An arrangement of the control which will permit the placing of the chauffeur's seat on the left side of the car, instead of on the right, as is now the almost universal practice, should be given the serious consideration of designers, especially those who are interested in the development of the type known as town cars.

That the control should be at either the left or right hand is a matter of little moment, but that the chauffeur's seat should be in a position where he would have every advantage for driving is of prime importance.

When the chauffeur is seated on the right side he is at a great disadvantage in learning if a vehicle is overtaking him on his left—as required by the traffic regulations—at the moment when he is about to turn

to the left; looking behind him on the right a large section of the street is hidden from him by his car. To have a clear view he must stand up and look over the back, or if the design of his car prevents that, he must leave his seat and look behind from the left. A turn to the right does not require any of these precautions. Vehicles are not supposed to pass him on that side and there is no occasion for extreme caution when changing his course in that direction.

The convenience of the passenger in a runabout, or in the front seat of a touring car, is another reason for the left drive. It obviates the necessity of walking around the car, frequently through mud and slush.

The argument that is sometimes advanced that shifting of levers would be unhandy to a driver, possesses little merit. A very little experience will suffice to make such an arrangement entirely practical.

It is fair to assume that chauffeurs realize that eternal vigilance is the price of safety and that generally speaking, all reasonable precautions are used to avoid collisions. The careful chauffeur is, and the careless one should be, constantly on the alert and any arrangement that tends to assist in the avoidance of accidents and the convenience of owners, is a long step in a right direction. Control from the left seat is a step of the sort.

About the Hydraulic Clutch.

In the way of an infinitely variable speed changing device for connecting the motor to the driving gear of the car, and aside from the ordinary friction drive, safe to say nothing is more attractive from the theoretical point of view than the hydraulic clutch. For some reason which, perhaps is best left to conjecture, however, this system is not undergoing the rapid development which might be expected. Indeed, up to this time, practically all designs which have been offered to the public, have been of foreign development and have not reached a sufficient degree of maturity to be installed regularly on a car.

The beauty of the hydraulic clutch is that it permits all possible ranges of speed by smooth gradations, at the same time providing means of carrying away the heat of friction which is an inevitable accompanyment of any alteration in the status of kinetic energy. With all mechanical forms of transmission in which the variable speed idea is entertained, even to the min-

imum degree contemplated in the friction

clutch, there is always the chance that

through extraordinary pressures, or other

adverse conditions, the temperature of the

working parts may be permitted to rise

sufficiently to cause abrasion. With the

hydraulic clutch this is impossible because

the fluid is constantly circulating and is

ever in contact with the walls of its con-

taining passages, the greater portion of

which are freely exposed to the air, and suf-

fer no danger of abrasion in any way. This

being the case, the only material effect of

heat due to overworking the clutch must

result in evaporation of the lighter ingre-

dients of the fluid and hence in thickening

it. To counteract injury on this account

therefore, it is only necessary to renew the

supply of fluid from time to time-a far

simpler process than that of renewing the

leather of a cone clutch, or the plates of

Another point which is worth consider-

ing in this connection, is that the so-called

hydraulic transmission, of which one or

two designs have already been developed,

is nothing more nor less than the plain hy-

draulic clutch subdivided in such a way

that the driving and driven elements may be

placed at the extremities of the power

plant instead of adjacent and co-ordinate.

as it were. Hence, simplicity and economy

of construction, argue the use of the clutch

rather than the transmission which carries

the same principle on a more extensive plan.

of the design of such a system. Chief

among them is that of the difficulty of regulating the amount of "slip." Generally

speaking a clutch that is adapted to afford a

desirable amount of slip in starting, fails

to hold perfectly when complete engage-

ment is required. This principle would

seem to apply regardless of the method em-

ployed in effecting the connection. On the

other hand, none of the purely mechanical

devices yet submitted to the test of prac-

tical use have proved to be perfectly satis-

factory in this respect, and it is reasonable

to suppose that the difficulty of slippage on

full engagement may be gotten over with

the hydraulic system by the use of some

method of positive engagement, if it be

not possible to effect it directly and by a

more ideal method. Certainly the field is

one of the most attractive imaginable, and

its exploration has not as yet been carried

to such a point that the inventor need be

seriously hampered in carrying out his ideas.

There are several obstacles in the way

one of the disc type.

THE MOTOR WORLD

TO TEST INTERCHANGEABILITY

Something New in Contests—Reassembling of Dissected Cars to Precede Speed and Endurance Trial.

One of the most unique trials ever scheduled is soon to be undertaken in England under the auspices of the Royal Automobile Club, in which, oddly enough, the only entries will be that of the Anglo-American Motor Car Co., British agents for the Cadillac cars. This test will consist of the complete dissection of three of the 8-10 horsepower cars which are so well known in this country, their re-assemblage after inspection by the committee in charge of the affair, and the subsequent speed and endurance test on the Brooklands track. The object is to prove the claim of complete interchangeability which is one of the strong "talking points" of the Cadillac pol-

The plan is to have the Expert and Technical Committee of the club select any three cars, either from stock, from the importing crate, or from actual service, each machine to be held under rigid observation until the conclusion of the test. Under the tutelage of the committee, they will then be reduced to their lowest terms, and all the parts from each machine will be mingled in an indiscriminate heap on the floor of the club garage. From the pile, the judges will then se lect the proper number of parts and sort them into three separate heaps, from which employes of the agents will be required to construct three new machine. On request of the committee, it will even be permissible to introduce new parts from the agents' stock of spares, in order to prevent any possibility of special preparation for the

The final proof of interchangeability, which is to succeed a close inspection of the rebuilt cars by the judges, will be a test run on the Brooklands course, in which each machine, carrying two passengers, will be called upon to cover not less than 500 miles. Needless to say, the project, which is to be put into execution next month, is attracting a great deal of attention.

To Woo the American Dollar.

That the attractiveness of American dollars has suffered no diminution in the eyes of the gentlemen on the other side of the pond is shown by the organization of a British branch of the "Association Generale Automobile of France," for the purpose of "affording American motorists, who desire to tour Great Britain and the Continent, every facility for a comfortable journey with no discordant features," save frequent recourse to their letters of credit; and as a real live lord will assist in promoting that process it possibly may be made more agreeable than otherwise would be the case.

February 1-8, Providence, R. I.—Show in Providence State armory.

COMING EVENTS

February 3-8, Kansas City, Mo.—Kansas City Automobile Dealers' Association's annual show in Convention Hall.

February 10-15. Detroit, Mich.—Tri-State Automobile and Sporting Goods Association's annual show in Light Guard armory

February 17-22, Cleveland Ohio—Cleveland Automobile Dealers' Association's show in Central armory.

February 21-29, Newark, N. J.—New Jersey Automobile and Motor Club's and New Jersey Automobile Trade Association's annual show.

February 22, Boston, Mass.—Bay State Automobile Association's 150 miles endurance run to Providence, Worcester and return.

February 24-29, Portland, Me.—Annual show in the Auditorium.

March 2-7, Ormond, Fla.—Annual beach carnival, under auspices Automobile Club of America.

March 7-14, Boston, Mass—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

March 9.14, Buffalo, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

March 18-25, Rochester, N. Y.—Rochester Automobile Club's show in new Convention hall

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

The announcement, which comes from London, proclaims that this organization is provided by the establishment in that city under the auspices of Lord Montague of Beaulieu "of an organization which cooperates with another" which has a network of agents all over the world.

Just what part will be performed by Lord Montagu of Beaulieu is not stated unless indeed he will be "one of the accredited agents." with tours mapped out, who will meet Americans on their arrival at any of the chief English ports and guide them through the country or pass them across the Continent from one country to another without any further trouble over the customs duties after the necessary licenses have been obtained "by the payment of merely the official charges."

As the cost, aside from the "usual official charges," will be only \$25, the American tourists are assured of an intercourse with members of the nobility at a price within the reach of all!

Digitized by Google

ing vest pocket entries their identity was

MORRELL WANTS MORE ENTRIES

Despite His Previous Dictum, They Will be Thankfully Received-Eighteen Nominations for Briarcliff Race.

Despite the positive assertion of Chairman R. Lee Morrell that unless twentyfive entires were booked by February 1st, there would be no race for the Briarcliff trophy race on the roads of Westchester

not disclosed. Adding 18 and 3 together Mr. Morrell

correctly gave the answer as "21," which, plus 4 would make "25," so would it not be advisable to hold the entry list open a little while longer? The advisory committee naturally agreed that Mr. Morrell's mathematics were correct and all hands will make efforts to secure a few more cars.

While the necessary entries have not been received, those drivers who expect to parVanderbilt course. Joseph Tracy, of long experience and conservatism, who will drive a Simplex, asknowledges that the worst portions of the Briarcliff course are "very much worse than the Vanderbilt danger points." With twenty of its thirty miles consisting of wriggles and twists and angles and bad curves, to say nothing ot steep hills and narrow roadways, the Westchester course, as the Motor World previously stated, is chockful of "possibilities." Strangely enough, the grandstand will be located between Eastview and Briarcliff

where the spectators will not be able to see more than 100 yards from the start because of two sharp turns and bendings of the road beyond a hill. On the other side of the grandstand the cars may be seen on at least a half mile stretch of straight road, one of the very few stretches of the kind on the entire course. The accompanying picture of the road near the grandstand location will convey a good idea of the twisting nature of the road. The only opportunity for safe fast work is on the straight road near Briarcliff.

The exact distance of the race has not been fixed. The time limit-not for the entries, but for the race—has been set, however. It will be eight hours.

Bill to Prohibit Road Racing.

Although preparations for the Briarclift race are going on it will be impossible to hold road races of any sort if the measure prepared by Assemblyman Yates becomes a law. The bill, introduced yesterday, repeals that section of the New York State



STRAIGHT MILE OF MACADAM NEAR THE FINISH

county, New York, April 24th, the first of February came and went and—although but 18 entries are in hand, the race is not off and Morrell is still willing to accept entries at \$1,000 each.

When the entries were supposed to have closed on Saturday last, 1st inst., 18 cars had been nominated, according to the list made public, which was as follows, the name of the drivers being in parenthesis:

Paul LaCroix, Renault (Bernin); C. M. Hamilton, Isotta-Fraschini, two cars (Poole and Harding); J. H. Tyson, Isotta-Fraschini (Strong); H. A. Lozier, Lozier, two cars (Mulford and Michenor); C. B. Tangeman, Hol-Tan (Fosdick); C. A. Singer, Simplex (Tracy); E. Rand Hollander, Fiat, two cars (Cedrino); S. B. Bowman, Apperson (unnamed); A. Hammerstein, Allen-Kingston (Campbell); J. J. Brown, Maja (Murphy); Harry S. Houpt, Thomas Flyer (Roberts); H. W. Whipple, Stearns (Oldfield); Wyckoff, Church & Partridge, Stearns (Vaughn); F. B. Stearns, Stearns (Leland).

As this formidable list was seven cars short of the requisite number, the "advisory committee," composed of newspaper writers, was asked for "advice"; at the same time it was stated that Morrell had three more entries tucked in his vest pocket. Be-

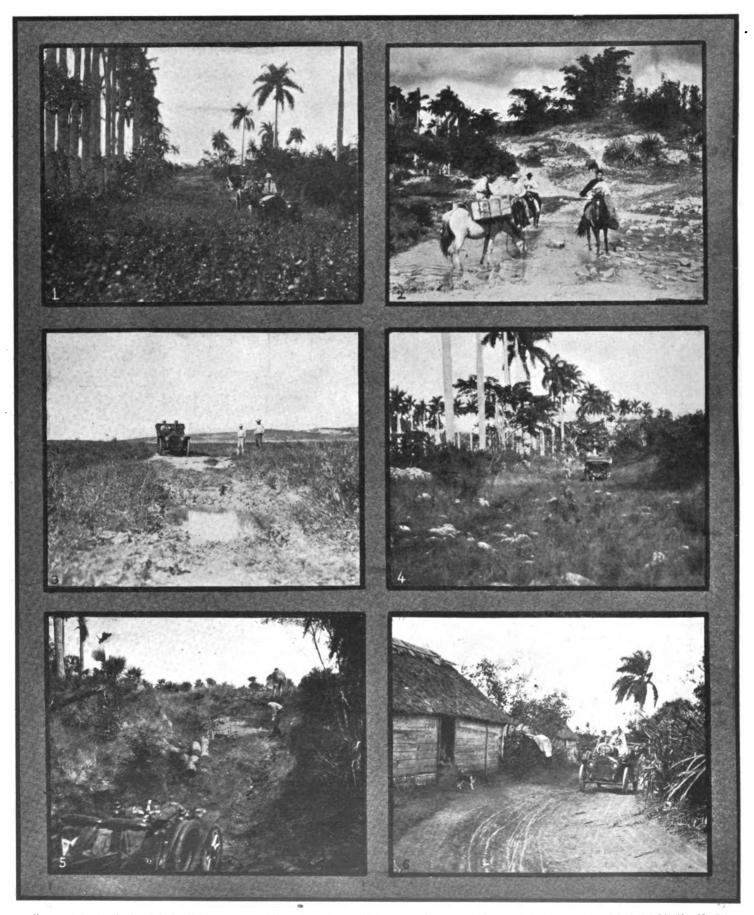


NEAR GRAND STAND, SHOWING WINDING NATURE OF THE COURSE

ticipate already are training on the course and some of them admit that the course is far more dangerous than the Long Island law which gives town boards and boards of supervisors of a county the right to set aside roads for such purposes.



SCENES ON ROUTE OF PACKARD EXPLORERS IN CUBA.



1, "ROAD" IN MATANZAS PROVINCE. 2, ONE OF THE SHALLOW STREAMS. 3, CHAIN OF MUD HOLES MARKING A ROAD IN SANTA CLARA.
4, ROCKS AND BOULDERS FOR A ROADBED. 5, EMERGENCY ROAD IMPROVEMENT ON A SANTA CLARA HILL.
6, CUBAN SUBSTITUTE FOR A HOTEL.

PACKARD EXPLORATION IN CUBA

Despite Reports to the Contrary There are no Good Roads—Strenuous Experiences of the Explorers.

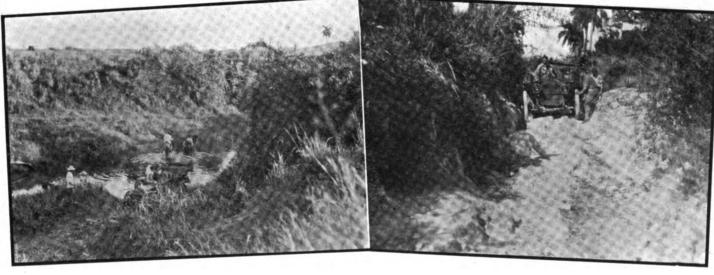
To travel hundreds of miles in Cuban territory through which no four-wheeled vehicle of any kind had been before was the recent automobiling feat of S. D. Waldon, sales manager of the Packard Motor Car Co., and party, in a Packard "Thirty." The wide advertisement which has been given the few good roads which lead out of Havana in certain directions, conveys a wrong impression of travel generally throughout

continuation of washouts and ravines which formed the only way through the mountain passes. Each day there would be from three to ten rivers to ford. Cuban rivers flow deep, between banks 50 to a hundred feet high. Their beds had to be reached by following the tortuous channel of some erstwhile mountain stream which had once run into the main river. Then came the ford, with the car on the uncertain footing afforded by the solid but uneven rock of the river bottom.

During the latter days of the journey the heavy rains of a delayed wet season turned the red clay into a trail of sticky, heavy mire and created in every valley and low spot a seemingly bottomless hole. In several instances they were so wide and deep

Each night the tourists staved where they were at dark. Traveling at night was impracticable, and as there is no twilight in Cuba, it was necessary to accept the accommodations at hand when the sun set. The first night out a camp on the ground was made at the bottom of a deep valley, supper being obtained from a Cuban farmer. Succeeding nights were spent on cots or in hammocks in the sheds or living rooms of farm houses and country general stores; one night was sleepless, with all four tourists bunked in a row on the table of a sugar mill eating house; while the most unique night's rest was that spent in hammocks swung under the thatched roof of a commodious pig pen.

The general direction of the tour was



TYPICAL FORD IN A SANTA CLARA RIVER

TRAIL THROUGH A CUBAN RAVINE

the country. When Mr. Waldon accompanied by Edwin S. George, Fred Crebbin and E. Ralph Estep, arrived in Havana and announced the fact that they intended to do a little touring in interior Cuba in a motor car, there went up a general protest. Hotel men, the American garage owners, sugar planters, railway men, guides and interpreters all said: "It cannot be done."

The interior is without roads. trails lead from one place to another. There is no long-distance traveling. The only vehicles which attempt to go about the country are the high-wheeled ox-carts for hauling sugar cane. They are drawn by three or more yoke of oxen. Their wheels are from seven to ten feet high. They cut the soft ground into parallel lines of wide ragged ruts two to four feet deep. Where the ground is hard it is littered with immense boulders or else itself is the base rock of the island. Then the rough trail may wind into a region where there is nothing to mark the route but the sun or compass, and no break in the succession of long, tedious miles of persistent traveling through grass as high as the car.

From lowlands and plateaus the way leads into rugged hills and mountains. Here the road taken by the Packard tourists was a

that it was necessary to build a rough corduroy of palm logs and underbrush in order to cross

Travel was, of course, slow. Some days 30 to 40 miles, one day 63 miles, and then one hard-fought day's journey of 14 miles. It was on this day that three deep rivers, within a few miles of each other, were forded in the heart of the Santa Fe mountains. Many times the road was so difficult that the easier way to progress was to open fences and drive into and through fields. These might be plowed ground, rough, wild grazing lands or sugar cane fields where the path would have to be taken in the uneven lane between the tall cane and the fence.

Each day the condition of the country would change. One day after running out of rocky hills where the car had clambered over areas so uneven that the front tires actually would be pulled from the rims, there was encountered a broad level tract in which there was nothing but grass, brush, stones and palm trees as far as the eye could see. Steering by the sun, the tourists were lost in the barren country for hours, and reached a populated section only by striking out of the general direction toward the railway, and then following it.

from Havana to Matanzas; thence, via Jovellanos and Macagua, to Santa Clara, and from there, by a crooked route through Camajuani and Placetas, to Sancti Spiritus. The car was without special equipment, except the axe, mattock and shovel picked up en route for use by the engineering department. At the suggestion of a Cuban farmer, who had witnessed the way in which the Packard had raised herself out of a deep mud hole after having been given a foundation of stones on which to obtain traction, the car was nick-named El Toro. This name, roughly painted on the sides of the car, immensely pleased the rural Cubans. who, of course, had never seen any other automobile.

Of experience there was a plenty and the tourists have tales to relate which seem almost unbelievable—tales of unprecedented hill-climbing up jagged rock stairways that seemed as though they would tear the car to pieces; of wallowing in the long chain of mires and bogs which made up the road of several days; of fording rivers by following the narrow ridge of high places on the bottom; of wonderful feats in quick road engineering to avoid unnecessary work, and tales of the innocent Cuban inlander, his country, his family and his food.



CHIP ON THE MAXWELL SHOULDER

Twelve Cylinder Marvel Ready to Meet All Comers Under Dewar Conditions—Two Miles a Minute Cars Eligible.

If any one anywhere in the world has any kind of a car they think can "go some" all he needs to do to get on a race is to notify the Maxwell-Briscoe Motor Co., at Tarrytown, or Robert Lee Morrell, of the contest committee of the Automobile Club of America. For the Maxwell people think they have the car that can do a mile in at least 27 seconds.

The Maxwell speed creation has no less

THE MOTOR WORLD

The proposed economy run does not differ in any way from others of the sort that have been promoted by the Brooklyn organ ization. No penalties will be made for repairs, replacements or adjustments to car or tires, the only condition being that the contestants must complete the 242 miles within the set time, made the night before, and based on road conditions at that time.

The winner will be the car that carries its full quota of passengers at the lowest cost for each person, fuel and oil only to be considered. Gasolene will be charged at the rate of 25 cents per gallon and lubricating oil at \$1.00 per gallon. Instead of sealing the tanks each car will be given sealed cans of fuel and oil, which will be in charge of the observer.



MAXWELL MULTICYLINDER RACER ON TRIAL SPIN

than 12 cylinders which develop 180 horsepower. The car has been built for some time; in fact, it was constructed for the last Vanderbilt cup race, but has been greatly improved and now is ready to meet all comers.

The Maxwell people naturally were disappointed when the Dewar trophy race was scratched from the Florida program, as they had designs on that trophy, and now have issued a sweeping challenge to all speed merchants, whether advocates of steam or gasolene, to meet them in a race under the Dewar conditions, either during or immediately following the Florida beach tournament. Further than that, they say their multi-cylindered racer will be in evidence for the Dewar trophy whenever the race is held, and have asked Morrell to arrange a contest.

Long Islands Promote a Winter Test.

If the present spell of cold weather continues the Long Island Automobile Club, of Brooklyn, will on Tuesday, 25th inst., hold what it thinks will give the contestants some of the rigors of a New York-Paris race, via Alaska and Siberia, without all of its hardships. On that day it will hold a 242 miles economy test, from Brooklyn to Montauk Point and return.

Entries will close on February 20th, although they will be received until 6 p. m. the day before the contest, at an additional fee. Dealers will be limited to three cars each, the entry fee for the first being \$25, for the second \$15, and for the third \$10. The prizes have not been selected, but it is stated that \$200 will be expended for the first, \$100 for second, and \$50 for third.

Holding Motorists Wholly Responsible.

It is the driver's business to look out for the pedestrian, and not the latter's business to evade automobiles. Such is the substance of a decision by the District Court of Appeals in Los Angeles, which declares in effect that pedestrians cannot be charged with contributory negligence if they do not keep out of the way of automobiles. The decision confirmed a judgment for \$7,000 damages awarded Stanley King, who had been injured by an automobile of E. K. Green.

Boston Arranges Endurance Run.

Boston is to have an endurance run on February 22d. This was decided by the Bay State Automobile Association last week. The route will be from Boston to Providence, then to Worcester and back to Boston, making a triangle of 150 miles.

AUTOMOBILE SPEEDWAY IN JERSEY

Another Project for the Construction of One in the Lakewood Region—Philadelphians Incorporate.

For about the fortieth time that stretch of waste land which is situated southwest of Lakewood, N. J., is to be converted into an automobile speedway. Since the subject was first broached more than two years ago there have been numerous companies organized to build a course through the pine forests there, but like most projects of the sort they died the natural death. The latest scheme for the realization of the proposition was announced this week.

Philadelphia capitalists, it is stated, under the title of the Hanover Consolidated Co., of New Jersey, have acquired 20,000 acres of land in Burlington and Ocean counties and have decided to build an automobile speedway twenty miles long and 100 feet wide. This differs materially from all previous New Jersey schemes; they were to have been five mile circular tracks, but the several companies promoting them have not been heard of since. Whether they ever succeeded in selling any of their stock is not known.

According to the announcement it will cost about \$400,000 to build the track, club houses, garages and other things of the sort, which usually play a leading part in the plans of speedway promoters. The capital stock of the new company is \$600,000 and the Colonial Trust Co., of Philadelphia, is named as the trustee. It is planned to locate the speedway between Brown's Mills Junction and a point twelve miles south of Lakewood, which would make it near Toms River. The land is absolutely worthless except for sites for proposed speedways and for unscrupulous real estate sharps who find admirable building sites there.

"First mortgage gold bonds to the amount of \$400,000 will be issued and sold to meet the expense of the erection of the speedway, club house and garages," says the announcement. "All holders of 100 shares of stock in the Hanover Co. will be entitled to full membership with all its privileges and free entrance to all races perpetually."

Contrary to most schemes of the sort the promoters do not keep their names in the background, but publish the full personnel of the Hanover Consoldated Co., as follows: President, William H. Wile; vice-president, John P. Harlan; treasurer, E. T. Davis; secretary, George A. Kiefaber; directors, William H. Wile, George A. Kiefaber, S. J. Phillips, E. T. Davis, W. S. Wilson, John P. Harlan, William H. Wile, Jr., and A. McCracken, all of whom are residents of Philadelphia.



Motor Cars as Mediums for Municipal Graft

Concluding Story in Which is Included Extracts From the Diary of a Municipal Chauffeur, Showing Just How and for Whom the Taxpayers' Automobiles are Employed in Private Service—Speed and Lamp Laws not for City Officials.

In last week's instalment of my story, I told of my first experience in being placed under the orders of persons who were not in any way connected with the department for which I worked, or connected in any way save by ties of relationship or friendship with the municipal servants.

There are those who may maintain that if I actually possessed the pride or self respect that I claimed to possess I could not and would not have obeyed an order that was so manifestly improper if not actually dishonest; and there may be captious critics of my conduct who will say that I should have refused to permit my services to be placed at the command of women, and that I should have insisted on being used only for the work of the department; these critics will maintain that I would have won the point, as the inspector would not have dared to incur the notoriety I could have caused by bringing the matter before the city authorities in such a way that the daily papers would have revelled in the opportunity for devoting columns to a subject that with its many side details furnished choice scandal in public, as well as in private life.

But in suggesting this solution of the problem my personal feelings are not taken into consideration. In the first place I am opposed to notoriety, and would not consider a course of action that would place me in the limelight; besides, I liked the inspector for many of his personal qualities. Our relations were entirely friendly. Above all, I could not bring into a personal grievance the names of women who were respectable, or the names even of other women who possibly had had respectable parents, and this would have been required of me if I had made any claim of unfair treatment or had endeavored to make my position more agreeable by appealing to the higher authorities, and calling to their attention the nature of my work.

Lures of Public Position.

It is true, I could have resigned, but my several years in the department had caused me to look upon my position as being necessary to my maintenance. I did not realize that I could do as well in the outside world, a world that seems very foreign to the municipal employe who learns soon to believe himself a thing apart from other mortals, and I thought of my home and those dependent on me and was willing to make great sacrifices of myself rather than to bring worry and care and an uncertain future into the home circle. And through it

all was the constant thought, "It can't last."

Then, too, as a municipal chauffeur, I was given certain privileges over other drivers that were not without an effect on my estimation of, if not of myself, of my importance to the community: the right of way was mine if the department sign was on the car, or if the police officer recognized me as a part of the city administration. The speed laws may have been made for others, but I was exempt. If I entered into a friendly race on a public highway with some innocent chauffeur he was promptly arrested and I was not required to even slow up lest maybe some important city business be delayed! I used lights at night only when agreeable to me. If I was out of oil or gas I didn't bother to replenish the supply until it was entirely convenient.

Indifference to the Law.

One night when I was speeding on one of the driveways, my tail light went out and a policeman noticing it as I passed gave chase on a bicycle; several blocks were traversed before a trolley car caused me to reduce speed, and he caught me. First, he declared me under arrest for traveling at the rate of 20 miles an hour, also for driving without a light at the back. I responded by telling him what I was, and further directed him to light the offending lamp for me, and he, wise in his generation, knowing that the influence of my superior might cause him to be transferred to patrol duty, complied and explained his mistake in delaying me by stating that he did not know it was a city car, as no sign was displayed. While all this was going on, the inspector and a woman companion held their peace in the tonneau.

These liberties were not without their influence. I enjoyed the feeling of immunity from arrest. I was frequently envied by "private" chauffeurs who wanted the same security and it all tended to make me desirous of retaining the position.

There were times, though, when the breaking point was so near that it is remarkable it was not reached. An instance of a near approach to "mutiny," insubordination," "failure or refusal to obey or ders," or anything else you may care to term it, occurred one night when I had driven the inspector and his sister, and her three children to one of the popular eating houses of a resort about twenty miles away. It was midnight when I left her at her home and there was still an hour's work before me, as he had to be taken to his apart-

ments after which the machine must be brought back to its regular shelter, about three blocks from the sister's home. As he left the car-it was nearer 1 a. m. than midnight-he directed me to meet his sister at 7 in the morning and drive her to the depot as she was going away for her summer vacation. The injustice to me, the absurdity of the idea is apparent when I state that she lived one and one-half blocks from the depot, and it is fair to assume that before "Brother's" unexpected affluence, walking was considered a desirable means of locomotion, even when distances much greater were to be traversed. I failed to appear on time and the lady walked. Expecting trouble as the result of my "failure to obey orders," I prepared an address, the chief characteristics of which was directness rather than diplomacy, but no occasion arose for any remarks as the inspector made no comment when I merely reported "too late; your sister had gone." It may be that he saw "blood in my eye," or perhaps the proposed ride of a block and a half was an incident of too little importance to become the cause of an official censure.

Rendering Menial Service.

From time to time I was directed to attend to little personal affairs of the inspector, such as carrying his soiled linen to a laundry; delivering to some one a grip he had loaned, and later going after it; moving the effects of a friend who changed from one boarding house to some other, and little things of this sort. There were so many of these "municipal duties" that to recite even the majority of them would be tiresome and would be the means of causing the accusation that I grossly exaggerated, if indeed, I was not lying.

As an evidence of the fact that I am not relying on memory or citing instances which occurred at long intervals, I append here extracts from my diary. These are the records of consecutive days, made at the time and now copied without additions or changes, save that I have used substitute names for the individuals and places in lieu of the correct ones, which are contained in the diary.

The day of the arrival of the mother and father of the inspector from their little home in the country, seems a fitting place to begin the diary records:

"Monday, 8th.—In shop from 8 a. m. until 4 p. m., working on chains; then to depot. Met inspector's father and mother, also the inspector; drove to sister's house in the suburbs; joined by sister, drove to



Athletic club for dinner; joined there by brother-in-law and brother; left at 9.40 for suburban home, where we dropped mother, father, sister and brother. With others drove to inspector's rooms in the Bleak-side. Raining hard. Three blow-outs after leaving him. Got in garage at 3 a. m. Nineteen hours' work.

"Tuesday, 9th.-Left garage at 7 a. m. At suburban house at 8. Father, mother and brother to excursion boat; tinkered car as chains were bothering until time to meet return boat at 5 p. m., when father, mother and brother rode to the Bleakside, where they left me. Met the inspector and drove him to a restaurant where he had an appointment with Mr. Cutting. Supper at 8.30. Picked up inspector, drove to another restaurant, joined by father, mother and brother. Back to suburban home; dropped relatives and picked up stranger, who returned to the Bleakside with the inspector. Was to have taken stranger home, but a chain had been coming off frequently, so I went direct to garage to repair it in readiness for next day. 171/2 hours.

Joy Rides Day and Night.

"Wednesday, 10th.—Left garage at 8 a. m. Went to manufacturer's shop and had new emergency drum put on rear wheel. Drove to suburban home where father and mother entered car; returned to the Bleak-side, joined by brother; made a round of calls; then to depot; brother left; returned to suburban home, parents left; then to garage—only 12 hours.

"Thursday, 11th—In garage at 7 a. m. Cleaned engine, oiled and made some adjustments; drove to suburban home, where father and mother got in; took them to the Bleakside; joined by inspector; went shopping; drove to depot, father and mother left on train; drove inspector to the Bleakside, then to the Clear Wilde apartments where Mrs. Blank and Mrs. Dash joined us. also Mr. Goode. Drove to Mellwood inn-me to the kitchen-returned to the Clear Wilde, dropped Mrs. Blank and Mr. Goode. Drove through park for an hour, then to within a block of Hotel Hartford where Mrs. Dash left us and walked to hotel. Then to the Bleakside. Garage at 11.30 p. m. 16½ hours.

Friday, 12th.—Didn't show up until 10 a. m. Drove to office. Inspector did not come out until 12. Drove to Willmot's restaurant, which he entered; at 4 he came out with Mrs. Dash; she left him and I drove him to Hotel Wellingford; joined there by Mr. Close and his fiancee; drove to the Bleakside, where the inspector's room mate, Mr. Clear, joined us; then to Woodyview inn, at which place some sort of a function at Mr. Close's expense, occurred. I fared well in the servant's quarters. Returned to the Willingford, dropped Close and fiancee; to the Bleakside, where inspector and Clear left; then to garage at midnight. 14 hours.

"Saturday, 13th.—As I didn't have to go out until 11 a. m., spent 3 hours trying to

fix rear right wheel where the chain was noisy and troublesome. Was at the office at 11. Joined by inspector after a 2 hours wait; drove to Hotel Graham; joined there by Mrs. Dash; drove to Innwood restaurant, where inspector and Mrs. Dash were left while I drove to home of Inspector's friend and presented a letter; later I returned to Innwood and took inspector and Mrs. Dash for a short drive. Left Mrs. Dash at a point where she could get a trolley to her hotel; drove inspector to automobile agent who took him for long demonstration ride; but I was off at 3.30—only 7½ hours.

"Sunday, 14th.—Off. (This does not occur frequently.)

"Monday, 15th.—In shop from 8 until 5. Transmission needs overhauling.

"Tuesday, 16th.—In shop from 8 until 5 on transmission.

Excessive Wear Ignored.

"Wednesday, 17th.—In shop at 8 with orders to positively have car in running order by night. At 5.30 p. m, took car out not nearly finished. Went to the Bleakside where inspector and his room mate got in. Drove downtown; nearing the house where I had been ordered to stop, Mr. Clear left us. Lots of ignition trouble. Joined by inspector's cousin; drove them to Latan's for dinner. During the two hours' wait I straightened out some ignition difficulties; then he and she came out; although one of the chains was continually coming off, owing to a worn out rear sprocket, he insisted on a drive through the parks and boulevards. Took cousin to downtown home, then returned to the Bleakside. Chain had come off eight times. Returned to garage at 12.10 a. m. 16 hours.

"Thursday, 18th.—Found that the inspector had ordered another chauffeur to take the car to the manufacturer's shop to have sprocket put on. During the trip the wheel was broken. I had been excused until 4 p. m. When I found the car was out of commission I went to the Bleakside. The apprentice was there with the little car. took this from him and when Mrs. Dash, Mrs. Blank and Mr. Goode came out of the inspector's apartments they brought instructions from him for me to take them riding. As the little car had only three cylinders in working order, they quickly tired of their ride, and a restaurant became their destination, after which I returned to the repair shop at 8 p. m.

"Friday, 19th.—In shop from 8 to 5.

Saturday, 20th.—Big car in commission again. Directed to wait orders from Mrs. Blank. At 2 p. m. received message to have car at Clear Wilde apartments at once; she and Mrs. Dash were waiting; made some calls; drove through park; dropped Mrs. Dash at her hotel; joined at Clear Wilde by Mr. Goode and Dr. Keene; drove to Woodyview, where they had dinner and I had dinner and other things in the servants' quarters. I accepted Goode's invitation and

had cigars, drinks, etc. First time I have taken liquor when driving, but I'm played out; had tire trouble in the afternoon. It rained at night and chain trouble occurred. Returned the party to the Clear Wilde, then to garage at 12.15 a. m.—161/4 hours.

"Sunday, 21st.—Inspector out of town. Off again.

"Monday, 22d.—From 8 until 5, in shop. Put on new sprockets, then to the Bleak-side, where inspector got in; then went to the Clear Wilde; joined by Mrs. Blank and Mr. Goode; drove to Hotel Reem where they had dinner; then to the Clear Wilde where Mrs. Blank left, after which to a point where we watched a department demonstration of a new disinfecting scheme for two hours—my first work in the city's interest in many weeks. In garage at 12.15 a. m.—16¼ hours.

"Tuesday, 23d.—Met the inspector's father, mother and brother-in-law at boat landing at 8 a. m. Drove to depot where father and mother left; took brother-in-law to office; waited four hours, then drove him and Mr. Goode to ball game. After which the inspector joined them; drove to the Clear Wilde, where there was a wait of an hour, then the inspector and brother-in-law came out and were driven to the Bleak-side. Reached garage at 8 p. m.—12 hours.

"Wednesday, 24th.—In shop on transmission

"Thursday, 25th.—In shop on transmission

Queer Places Visited.

"Friday, 26th.—In shop from 8 until 4, then to office; drove inspector to Hotel Niagara; joined by Messrs. Gay, Close and Dr. Keene; drove to Mr. Gay's house and got his baggage; to a cafe; to depot, where Gay left us; then to Waterview, where they spent two hours at dinner, during which, in an unexpected moment one of the party fell through some shrubbery to the great dismay of the proprietors and discomfort of other patrons. Later we went to a residence of heavy curtains, and solid doors where all left the car and I went to the garage at 11 p. m.—15 hours.

Saturday. 27th.—To the office, where a message directed me to a hotel; joined there by inspector, Mrs. Blank, Mrs. Dash, and Mr. Goode. After an hour's drive Mrs. Dash left at a point near her hotel, while we drove to boat landing where the inspector left; then to a friend's residence, joined by him, went to Woodyview for dinner, after which the different members of the party were returned to their respective abodes and I to the garage at 12.15 a. m.—12½ hours.

But why go on? Is not my contention proved that the city's business had but little of my time or services? I have reproduced a record of consecutive days. I can skip here and there and give instances of rides out of town, of one occasion when the odometer showed 162 miles for the day's trip, and the only passengers were a law-

yer and his woman friend, and in justice to him I must say that he paid for the gasolene used and wanted to pay me for my services. He was the only one who ever did the former or offered to do the latter.

The machine was frequently loaned to friends, the city paid for its upkeep and maintenance; tires, gasolene, lubrication were paid for by the taxpayers; the salaries of the men in the repair shop came out of the city's funds, and all in all, it was graft from beginning to end; it was dishonest and it was illegal. And the inspector to whom I was assigned was but one of many city officials who similarly misuse the city's property. I saw and heard enough of other officials to make certain that my original statement that 80 per cent. of the use given the city's cars is illegitimate and dishonest

Inspecting While Asleep.

Can any one, by a stretch of imagination, discover anything akin to municipal duty in a trip at night when an inspector and a man friend have dined both well and very unwisely? Perhaps not; but, even this kind of "duty" fell to my lot. On an occasion of the sort, the inspector ordered me to drive about the city as he desired to inspect certain public conditions.

Within five minutes after we started there were snoring noises coming from the tonneau. I turned and saw that both men were "dead to the world" so I drove where fancy dictated for a couple of hours, and finally stopped in front of the inspector's apartments, and after much effort awakened him.

"Will you do any more inspecting tonight?" I asked, and there was no tone of "envy, hatred or uncharitableness" in my voice

It took him a minute or two to realize where he was, what he was doing, or what he supposed he was doing, and then the answer came:

"No; I guess we've seen enough for tonight." And awakening his companion, they entered the apartment.

There is little need of carrying the story further. I have accomplished what I set out to do. I have demonstrated that the automobiles in the city's service are to a large measure treated as the private property of officials. There are exceptions, of course, even as there are other chauffeurs who can tell of "duty" similar to mine.

Prevalence of the Graft.

I often hear of "joy riding" and I could recite tales of trips by others that are more unbelievable than any experience of my own that I have recounted. I know of one case of a city official taking in a city's automobile a man friend and two women to a summer residence of one of his relatives after the latter had returned to the city and staying there two days and nights, the car being kept in the barn while the chauffeur occupied a servant's room and the

whole party lived on the contents of a generously supplied hamper that they had brought with them. Trips to the race track and to distant places are the rule rather than the exception, when baseball or football games are to be played by college teams. In fact, excursions to places where the official would not be willing to spend the amount necessary for the railroad fare. are constantly indulged in at the taxpayers' expense, until the whole question is a shame and scandal which will some day find a place in the daily press to the extreme discomfiture of a number of office holders. It may be that an exposé will even attract the official attention of a county prosecutor or district attorney.

From time to time one reads in the papers of some city official being arrested for speeding in a state in which he can have no official business. There are frequent reports of accidents when returning from race track or ball games, and these are but the surface evidences of a condition that is deep rooted. They may be the straws which show the direction of the wind, but by their frequency they may become the outward and visible signs which will lead to an examination that will disclose the thousands and tens, if not hundreds, of thousands of dollars which this modern form of graft is adding to the taxpayers' burden and which will bring to an abrupt termination a species of malfeasance in office that may be found to have been provided for by a section of the penal code.

Theoretically, and in the hands of a conscientious man, the municipally owned motor car in the service of a public official is an instrument which adds to his efficiency. Practically, it is a premium for the pursuit of pleasure which is equivalent to saying, a premium for neglect of the duty for which, as a rule, the official is too well paid.

Analyses of Cylinder Incrustation.

Considerable interest has been aroused abroad over the matter of cylinder incrustation as a result of the several analyses which have been made. One enthusiast has even gone so far as to advertise broadcast for samples taken from cylinders, which have been working under known conditions, promising to have them analyzed, hoping by this means to get at the subject in a broader way than would be possible by studying such conditions as might come under his own observations. In this connection, it is interesting to note that a new constituent of this rather peculiar substance has just been discovered in the shape of copper oxide.

Like the silicates, the discovery of which a year or so ago, caused no little discussion, it is difficult at first to see how copper can find its way into the cylinder. A little reflection, however, is sufficient to suggest that it is due in all probability to the abrasion of the carburetter throttle—this being the only copper or brass part which is in direct line of intercourse with the interior

of the cylinder. A second and more remote possibility is, that due to neglect of the precaution of cleaning out the engine base, a certain amount of wear from the crank shaft bearings might have become mingled with the lubricant to such a thorough degree as to be carried up into the combustion chamber with the oil. The sample under analysis was taken from a two-cylinder engine by the investigator in question, who does not attempt to explain the presence of the copper:

"Sample 'Front,'" as he explains, "was taken from the front cylinder of a two-cylinder engine, and it was believed that this front cylinder had been often over-lubricated. Sample 'Back' was taken from the back cylinder, which was believed to have been generally under-lubricated:

•	Front	Back
	Per	Per
	cent.	cent.
Oil (extracted with ether)		12.73
Loss on ignition (mainly car-		
bon)	64.46	71.65
Ferric oxide (Fe2O3)	7.19	9.51
Insoluble residue	1.30	2.44
Lime (CaO)	0.35	0.65
Copper oxide (CuO)		2.73

Big Increase in British Registration.

A gross increase in motor vehicle registrations amounting to 25,573, was recorded in the United Kingdom last year, the grandtotal of motor cars, both of commercial and pleasure types, together with motor cycles, amounting to no less than 119,618. The number of touring cars now registered is 61,617, while commercial vehicles are numbered to the extent of 4,124. These figures represent gains of 15,917 and 1,425, respectively, over the corresponding returns of 1906. The total number of driving licenses is now 205,606, or 38,041 more than the enrollment at the beginning of last year. Licenses awarded to owners of motorcycles, now number 53,877, as against 45,645 one year ago.

Making Damaged Bolts Available.

By filing several V-shaped grooves in the nut, it is often possible to straighten out the threads of a damaged bolt sufficiently well so that it will serve a very useful purpose. If the nut be of steel, it may even be hardened by heating it to a cherry red color and quickly immersing it in water. In the case of a damaged nut, it is possible to effect a similar repair by filing V-grooves in the bolt, and using it as a tap. In either case, care should be taken to follow the old threads as closely as possible. If the end of the thread is badly damaged it may be cut away by means of a file leaving merely the roots of the old thread as a guide for the extemporized "chaser."

"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.



PAGEANTRY AT PROVIDENCE SHOW

Military Review an Incident of the Opening—Many Cars Staged and a Long

List of Exhibitors.

Last Saturday night, 1st inst., was a red letter night for Providence, R. I. Three important events occurred—the opening of the automobile show, a review of more than 300 national guardsmen by Lieutenant-Governor Watrous, and the opening of the new State armory on Cranston street. They took place simultaneously and at the same location, as the armory building was "christened" with the annual automobile show and a military review, the exhibition being under the auspices of the Rhode Island National Guard, with the help of the local dealers.

In view of this pomp the opening was an auspicious one, despite the bad weather. The bright uniforms of the soldiers and sailors, and the feminine fluffy-rufflery heightened the beauty of the show decorations. After the show had officially opened the review of guardsmen took place in the drill hall in the basement.

The decorations were pleasing and novel as well. As the military authorities would not permit a single nail to be driven into the floor, the matter of arranging the decorations and dividing the booths became complex for a time. Both the balconies are covered with a buff and blue-striped bunting, hung from the railing, while back of this, on the walls, are paintings and American flags. With the exception of the aisles the floor is covered with green carpet edged with deep red, and the spaces are separated in the same manner, with a strip of red. Suspended from the beams overhead is a vertical border of the same material, divided into sections by loops every dozen feet. There are plenty of flags of every nation. Palms divide the room into sections for the various exhibits, which are:

American Locomotive Automobile Co., Berliet cars; Crane Automobile and Garage Co., Atlas; Davis Automobile Co., Peerless, Thomas, Winton, Oldsmobile, Locomobile, Buick and Cadillac; Arthur S. Lee, Corbin and Royal Tourist; Pugh Brothers, Elmore; Providence Motor Car Co., Ford; Dauer Automobile Co., Franklin; Crown Motor Car Co., Glide and Kiblinger; Aetna Bottle and Stopper Co., Grout and Maxwell; C. M. Linton, Jackson and Welch; American Motor Car Sales Co., American, Marion and Overland; Frank E. Wing, Marmon; William A. Harris Steam Engine Co., Mitchell; Edgewood Automobile Co., Northern; Flint Motor Car Co., Packard; Foss-Hughes Motor Car Co., Pierce Arrow and Knox; J. O'Donnell, Premier; William Hughes Co., Reo; Nock Automobile Co., Stoddard-Dayton; Snow Automobile Co., Stevens-Duryea; Pawtucket Automobile Co., Studebaker; Central Automobile Exchange, White and Stanley; Whitten Motor Vehicle Co., Rambler.

The Villers Co., optical supplies; Thompson Art Co.; Belcher Loomis Hardware Co., engine supplies; The Angier Co., accessories; Aspinwall Hardware Co., marine supplies; William A. Harris Steam Engine Co., engines; Waite Auto Supply Co., accessories; B. S. Clark, portable houses; Post & Lester Co., accessories; A. W. Harris Oil Co., lubricants; Blanding & Blanding, Foss-Hughes Motor Car Co., commercial vehicles; John A. Gammons; Nonpareil Brass Co., accessories; Visor Knitting Co.; Combination Ladder Co., automobile chemical engine and accessories; J. B. Draper Co., robes; Vaccum Oil Co., Mobil oils; Eutaw Supply Co., accessories; American Locomotive Automobile Co., commercial vehicles; Walter R. Harris, marine engines; Century Optical Co., goggles; B. A. Swenson, motorcycles; L. F. Pease Co., tents; Ira N. Peck, ball bearing tires.

Hillhouse Case Settled at Last.

An automobile upon which the duty already has been paid cannot again be taxed the full value upon its re-entry into this country, even though extensive repairs have been made while abroad. In the hard fought case of J. T. B. Hillhouse, acting for Mrs. Collis P. Huntington, the United States Supreme Court on Monday denied the Government's application for a writ of certiorari, deciding that cars brought back to America after being extensively repaired can be appraised only for the new parts and not as a unit, as contended by the New York customs officials. The rate of duty is set at 45 per cent. The refusal of the Supreme Court to consider the case also has had the effect of affirming the lower courts in holding that an automobile's use abroad for one year need not be consecutive. In other words, two periods aggregating more than one year will entitle a machine to free entry, according to the interpretaiotn of William J. Webster, one of the at-· torneys.

To Lubricate Enclosed Mechanism.

Sometimes such of the enclosed mechanism of the car as the drive shafts, rear axles, and clutch shafts, are provided only with small holes closed by pipe plugs through which the lubricant must be injected at rare intervals, these openings being so small and so inconveniently located that it is extremely difficult to force grease into them by means of "gun," because of the small area of the channel through which it must pass. A good tip for accomplishing this object, is to screw into the hole temporarily an ordinary compression grease cup by means of which a full charge of lubricant may be inserted with absolute certainty of its finding its way to the very bottom of the cavity. This method frequently may be employed where it would be impossible to use the ordinary gun.

KANSAS CITY SHOW ALL AMERICAN

With Foreign Cars Barred the Display Still is Large and Attractive—Typical Decoration of the Hall.

Kansas City is a typical American city a place of American people, American cattle and American ideas. This week, in Convention Hall, a thoroughly American show is taking place.

American cars only are displayed, the reason for that being that the Kansas City Automobile Dealers' Association is so impregnated with patriotism that it passed a resolution that cars of American manufacture only would be allowed on the Convention Hall floor, which explains why several dealers who handle foreign cars in Kansas are holding shows in their own salesrooms.

The show opened on Monday night, 3d inst., and will continue until Saturday night. The decorative scheme carries out the idea that the show is distinctly American and decidedly Southwestern, the latter idea being exemplified in the depiction of the great State seals of Missouri, Kansas, Nebraska and Oklahoma. In the effort at localization road scenes in and around Kansas City are much in evidence. The Missouri spirit, "you've got to show me if American goods are good enough for the American people" predominates. The exhibitors are:

Buick Automobile Co., Buick; Central Auto and Livery Co., Thomas; Fletcher Cowherd, Jr. Auto Co., Royal Tourist, Corbin, Stanley and Rauch & Lang; Deere Plow Co., Moline; Dempster Machine Co., Locomobile; Ettwein Motor Car Co., Stoddard-Dayton and Welch; Holcker-Elberg Carriage and Rubber Co., tops, bodies and wind shields; Jackson Motor Co., Jackson; Kaw Valley Auto Co., Mitchell, Premier and Mason; Maxwell-Briscoe Automobile Co., Maxwell; Midland Motor Co., Peerless, Pope-Hartford and Pope-Waverly; Missouri Valley Automobile Co., White and Reo; E. P. Moriarity Co., Packard, Stevens-Duryea and Woods; Palace Automobile Co., Pierce, Oldsmobile and Franklin; Rambler Automobile Co., Rambler; Richter Bros., Moon: Studebaker Bros. Mfg. Co., Studebaker; Baltimore Auto and Livery Co., Pullman; Cowle Electric Co., accessories; Dia mond Rubber Co., Diamond tires; Ettwein Motor Co., Auburn; Fidelity Oil Co., lubricants; B. F. Goodrich Co., tires; Kansas City Automobile Jack Co., automobile jacks; Loeffler-Avery Co.; Mercantile Lum ber and Supply Co., tires; Morgan & Wright, tires; Moriarity Co., accessories; Schacht Mfg. Co., motor buggies; Sellers Cycle Co., motorcycles; Sprague Umbrella Co., fronts and tops; J. H. Wittman, accessories; Wagner Motorcycle Co., motorcycles; Factory Sales Corporation, accessories; S. F. Bowser & Co., Inc., gasolene starage outfits; Fisk Rubber Co., tires.

FROELICH LETS HIS TONGUE WAG

"Bargain Dispenser" Airs His Views of Chauffeurs and Other Things and Makes Terrifying Threats.

When, on Friday morning, 7th inst., the last issue of the Motor World reached that part of New York City occupied by the second-hand cut price emporium doing business as the Times Square Automobile Co., there was evidence of agitation quickly followed by a rush to the telephone. Connection with the Motor World speedily was obtained and a man who said his name was Froelich heralded his presence at the Times Square end of the 'phone—four or five miles away.

Froelich announced that he had read the simple little story of the chauffeur who asserted that he had found his stolen accumulator in the Times Square establishment. Of course, Froelich never reads the Motor World! He never would have known of the story had not a friend happened in with a copy of the paper! Froelich's voice betrayed his agitation. He demanded that the man at the other end of the wire drop all business forthwith—that he "get busy, and get busy quick."

"You want to see us, and see us in a hurry," and Froelich laid strong emphasis on the word "see."

The man downtown appeared not to appreciate the Froelich idea of "seeing" or of "getting busy quick."

"What's the matter with the story?"

"It's false from beginning to end. It says that we are receivers of stolen goods."
"Does it really say so? Possibly you'd

"Does it really say so? Possibly you'd better read it again."

"It's blackmail, that's what it is."

"That's a pretty strong word. We suppose you can prove it if required. Has any one connected with this paper ever tried to blackmail you? Have you ever heard of them trying to blackmail any one else?"

"Well, you never print anything like that about your advertisers."

"Possibly because there never has been occasion for it?"

"Oh! you've got more than one crooked advertiser?"

"Can you name one?"

"Oh! you've got five or six of them. We know them."

"It's news to us. Why not name one? We certainly would like to know who they are."

"Well, we never advertised with you, anyway."

"Did we ever try to get you to do so? Has a man from this office ever even called on you?"

"Maybe he's done so and you don't know it."

"I guess we'd know it all right. But regardless of the fact, if there's anything

wrong about the story you can have all the space you want to correct it, or to tell your side of it."

"Why should you print the lies of that dirty, low, dishonest chauffeur? Wridgway knows that fellow and can tell you about him. He's a crook—all chauffeurs are vile crooks and you know it."

"But we don't know it. Can you prove it?"

"Well, there's not five per cent. of them that are not crooks. They are the scum of the earth. That vile creature that told you that story came in here and—"

"Oh! then he did call and see you?"

Between further heated denunciations which probably would give the chauffeur abundant room for legal action of two kinds, Froelich admitted that the chauffeur had called in search of a stolen accumulator, but declared that he (the chauffeur) was several varieties of vile liar—"vile" was a word that seemed readily to roll off of the Froelich tongue—as the accumulator he claimed was not the one that had been stolen, but was one that had been purchased from a reputable man who could be produced.

"Do you know who we are?" asked Froelich, who proceeded to answer his own question. "We are not the Manhattan Storage Co."-a rival "bargain" concern with a history which, like the Times Square company, advertises "We are the largest dealers in the world," and for which he expressed considerable regard. Then he detailed the great volume of business his concern had transacted. It was "away up in the pictures." The Times Square company had bought \$40,000 worth of tires from one company and \$117,000 from another, and had the receipts to prove it. Froelich meant to write both of them, intimating plainly that he meant to say that if, thereafter, they advertised in the Motor World, he would not buy from them again.

"Isn't that a species of blackmail?" asked the tender voice at the Motor World end of the wire.

"Well, I'll just write them, calling attention to your story," Froelich replied in a suddenly qualifying tone.

But before he got through Froelich let it be known all the other varieties of things he proposed doing to the Motor World. He intended to call down on it the United States government, that is, the postal department; he would see the district attorney; he would sue, sue, sue, and never, never, or hardly ever, let up.

Assured that any and all of those proceedings were within the privileges of every man, he was asked:

"Anything more?"

"Oh! you'll hear from us before the afternoon is over," was his final flourish.

The afternoon came and went—also five other afternoons—but the promised message has not put in an appearance. As, however, it is not the desire of the Motor World to present but one side of a case,

Mr. Froelich's story is chronicled substantially as he told it.

The Froelich brothers are the active managers of the Times Square establishment. Previously, they operated in Philadelphia as the Delaware Rubber Co., which enjoyed an interesting career, and an interesting finish. Though gone, it is not, however, wholly forgotten by quite a few persons.

Imports Shrink More Than a Million.

Throughout last year the business of importing foreign cars into America suffered to a material extent. The valuation of the 1.093 cars brought into this country is given as \$3,157,168, as compared with the \$4,416,048 declared during 1906 as the value of 1,295 cars. The average value per car, based on declared value at ports of entry, has thus fallen from \$3,410 in 1906 to \$2,946 in 1907. That the markets for cars and component parts of cars are more or less disassociated, is shown by the fact that the \$650,000 investment in foreign parts of 1907, was something like \$150,000 greater than the corresponding figure of 1906. By way of contrast, it is worthy of note that the American export business for last year was stronger by some \$1,950,000 than that of importation during the same period.

France has retained the lead in supplying the American agents with cars, no less than 835 machines having been entered during the year. This is about 100 less cars than were shipped to this country from the same source during 1906, however. The United Kingdom and Italy stand equal on the year's total, with 91 cars apiece, while Germany's contribution amounted to 53 machines. The remaining importations were from scattered sources. Each of the countries named has suffered a depreciation in its exports to America, that of Italy coming next to France. England's trading was only 6 cars less than during 1906.

Shanghai Dealers Handicapped.

"At the present time there are 111 licensed motor cars in use in Shanghai, 75 per cent. of which are of American manufacture, the leading makes being the Oldsmobile, Columbia, Reo and Rambler. The European cars are mostly of French and English make, but there are in addition a few German and one or two Italian cars," writes Consul General Charles Danby, of Shanghai, in a special letter to the American Exporter.

"Local dealers complain that a great drawback to increasing business in the automobile trade is found in the practice of manufacturers, who will quote the prospective individual buyers the same terms and prices that they quote to their regularly appointed agents, and that this is one of the principal reasons why the sale of American made cars is not pushed harder in Shanghai. They feel that if the manufacturers wish their cars sold in Shanghai they should offer some inducement to local dealers to get the business."

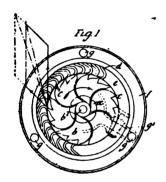


SIMPLICITY IN HYDRAULIC CLUTCH

Turbine Principle Applied with Reversed
Employment of Two Essential Parts

—The General Arrangement.

In its ideal form, the master clutch of the motor vehicle should be of such a nature as to permit perfectly smooth action at any and all speeds, whether of motor or car, and regardless of load conditions. Because of its nature and purpose, moreover, it should be of the simplest possible construction. It is interesting therefore, to learn that the most recent development along the attractive line of the hydraulic clutch takes the form of the outward flow turbine and comprises but three essential parts. These are the driver, corresponding to the stator of the ordinary turbine, the driven part, corresponding to the rotor of the regular turbine wheel, and a regulating valve, which



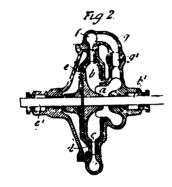
controls the passage of the active fluid through the other two portions of the device, thus controlling their relative motion. This remarkably simple conception is the invention of Edmund S. G. Rees, and is being exploited by the Rees Roturbo Development Syndicate, of Wolverhampton, England.

Structurally, the functions of rotor and stator are reversed in this case, the action being exactly opposite to that taking place in the power turbine, and corresponding to that carried out in the turbine pump The "impeller," as the driving member is called, is of the pressure producing type. and is keved to the crank shaft of the motor. As rotated, it serves to inject a stream of fluid against the vanes of the turbine wheel, which performs the part of a follower. The two parts are so contrived that the fluid circulates between them, and its passage is controlled by the by-pass valve, the relative speed of the two consequently being variable within wide limits.

The general arrangement is apparent from the two illustrations, which are, respectively, a transverse and longitudinal section. The fluid, which may be oil or glycerine, is admitted to the "eye," a, of the pump element, b, which is keyed on the crank or driving shaft, b1, and has outwardly directed nozzles about its periphery,

THE MOTOR WORLD

c. From these, the fluid is discharged at a velocity depending on the speed of the driving shaft, into the vanes or buckets of the turbine wheel, e, the angle of the working surfaces, d, being such as to deprive it of its energy by setting them in motion. The turbine is keyed to the driven or propeller shaft, el. The discharge from the turbine pesses throug the outlet pipe, f, which communicates with the inlet. The rate of dis-



charge, being controlled by the throttle, gl, of course, regulates the rate of transmission of the fluid, and hence inversely, the speed of the driven shaft. The device is self-contained, free from end thrust and should not prove cumbersome.

Napier Goes in for Motor Cabs.

There is no part of the world where the manufacture of motor cars has attained any considerable proportions that is not at present infected with the desire to produce low-priced vehicles of the rough-and-ready order suitable for cab service. England is no more behind the times in this respect than Continental Europe, but it is somewhat surprising to find that the Napier Co., which has for several years been such a strong exponant of the six-cylinder principle, has gone in for the construction of a twin cylinder motor cab of the light variety mentioned.

The power plant of this machine is of the unit type, the base supporting the 3½-inch cylinders, being rigidly bolted to the gear box and the aggregation suspended from three points on the frame. The change speed gear is of the progressive type and affords a direct through drive on the highest gear. Forced water and lubricant circulation also are features of the plant.

An unusual point in the design is the use of wire wheels. Otherwise, however, the mounting follows the lines of ordinary practice, the rear live axle, as well as the front wheels running on ball bearings, and the chassis being suspended on semi-elliptical springs. The wheel base is 96 inches, and a turning radius of 25 feet is made possible by the design of the steering gear. The overall length of the vehicle is 111/2 feet, the road clearance is 10 inches, and the height of the frame sills above the ground is 24 inches. The machine is being turned out at the Acton works of the company, and plans are under way for producing it in large quantities.

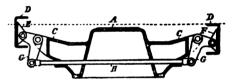
DESIGNED TO PREVENT "WEAVING"

Suspension Which Counteracts Differential

Movement in Sides of the Frame—How

the Effect is Secured.

Up to this time the only method of safeguarding the motor from the effects of 'weaving" in the chassis frame has been to use some adaptation of the three-point suspension principle. This system, while largely used, does not always lend itself perfectly well to the design of the machine in other respects, and also may be open to question somewhat when it comes to the point of absolute stability upder heavy vibration stresses. On this account the new motor suspension designed by F. H. Royce, inventor of the English Rolls-Royce car, is more or less interesting. It provides for a certain limited amount of differential movement between the two side members of the frame without in the least affecting the position of the motor. The effect is secured by adding to the usual sup-



porting brackets, a linkage consisting of two bell crank levers and a tie rod.

As will be seen from the illustration, the crank case and engine bed, A, is hung from the two frame members, D-D, by means of the two arms, C-C, as is ordinarily the case. The arms, however, instead of being attached directly to it, are connected by means of the horizontal arms of the two bell cranks, G-G, the lower extremities of which are connected together by the distance tie rod, H. It will be seen that as a result of this any tendency to elevate one side of the motor is compensated by a corresponding tendency to elevate the other side while lowering the first with relation to the frame, the linkage being so contrived as to bring this about. The arrangement while tending primarily to relieve the motor of unnecessary stresses also serves to distribute the vibration and torque thrusts upon the frame and so acts in a dual capacity.

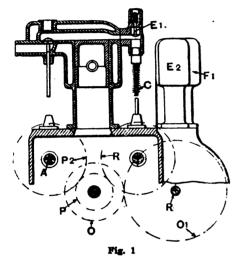
Prussia Plans a Testing Laboratory.

A state automobile testing laboratory suitable for carrying out all sorts of experiments relating to the advancement of motor traction, is soon to be established at the Technische Hochschule in Berlin. In his budget for 1908, the Prussian Minister of Education includes the sum of \$7,500 for the establishment of such a department. The money will be spent in adapting and perfecting the equipment of the laboratory already existing at the school.

COMPRESSED AIR AS AN AUXILIARY

Utilized for Alternate Power as Well as for Starting—Novel "Mixed" Cycle in an Ingenious System.

Several methods are in vogue whereby compressed air is made use of in starting the internal combustion motor which is used to drive the car, and in several instances it has been proposed to extend the principle in such a way as to provide in the compressed air an auxiliary to the motor sufficiently powerful to be used for starting the car as well as the motor, or for assisting the latter when overloaded. So far as



is known, none of the latter type ever have come into current useage. The apparent feasibility of the idea is so appealing, however, that it is not surprising to learn that it continues to lure inventors. The most recent development of it is found in the new six-cylinder Berliet "Marche-Mixte" motor, which is known as one of the "novelties" of the present winter by the French motoring publications.

Basically it consists of an ordinary sextuple motor with twin cast cylinders having the ordinary valves mounted on one side and actuated from a single cam shaft in a perfectly regular manner. Mounted on the opposite side and at the rear, is a two-cylinder, two-stage, double-acting air-compressor which is capable of supplying air to a charging reservoir at a pressure of 1.400 pounds per square inch, or thereabouts. Leads from this connect with a manifold running along the tops of the gas cylinders on the left side of the engine, the connections being made by means of siamesed ports cast in special valve chests which are bolted to the cylinders.

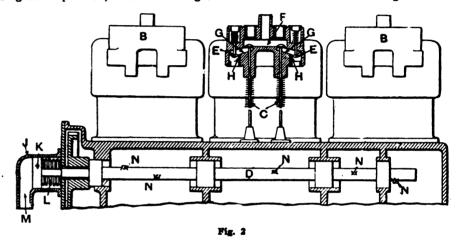
The general arrangement is shown in the accompanying illustrations in which Fig. 1, is an end elevation of the motor, looking toward the rear and showing the compressor cylinders, E2 and F1, which are necessarily of different diameters. The gears, O-O1, drive the compressor at half the speed of

the crank shaft, while the group, P-P2-R. operate the cam shaft, A, and the valves, C, employed to actuate the auxiliary valvegear. The arrangement of this system is shown in Fig. 2, in which it is apparent that the chamber, F, serves to distribute the air to the two cylinders of the group through the action of the main valves, C, which are worked from the cam shafts, D, below, and the check valves, E-E, which serve in the capacity of automatic inlets to the ports, H-H, leading to the cylinder in teriors. The valves, C, serve merely for purposes of timing, and admit the air through the ports, G-G, to the secondary and automatic valves below.

The cam shaft, D, is made to be displaced longitudinally, in order to throw its cams, N-N-N-N, into and out of action according to its position, thus controlling the

fects a "regeneration" of the compressed air, which is required to pull up the efficiency of the air cycle, and naturally, the presence of an extra amount of pure air in the cylinder has no deleterious effect on the burning of the gas, so long as the mixture has been formed properly and compressed in a homogeneous state, as is claimed.

For starting under air pressure, the reservoir pressure of 1,400 pounds per square inch is reduced to somewhere between 40 and 50 pounds, while for running on air alone, as may be done when slow speeds are required, a pressure of from 100 to 140 pounds is used. During the operation of the motor as a "mixed" air and gas engine, the intitial air pressure must be raised to something above that of the explosion, which is easily done with the high receiver pressure carried. The advantages claimed for



use of the air in the cylinders. An extention of the cam shaft beyond the driving gear, is fitted with a piston, K, riding in the cylinder, J, and is held normally to the left, or in the out-of-gear position, by the spring, L. Whenever air is admitted to the chambers, F, it is by-passed to the pipe, M, thus serving to force the piston, K, over sufficiently to operate the cam lifters and the valves, C. In this way the air system is thrown into and out of operation by manipulating the air-throttling pedal.

In starting the car from rest, it is necessary merely to admit air to the cylinders by way of the auxiliary valve chests, F, when the pistons are put in motion by the combined thrust and expansion of the air. The air valves are made to open only during the third or working stroke of the cycle, so that the action of the regular valves need not be interferred with in the least. When the carburetter throttle is opened, the suction stroke draws in gas in the usual way, and the regular cycle is taken up without further manipulation.

If the air throttle is held open after the regular operation of the motor has commenced, the effect is to increase the mean effective pressure of the working stroke owing to the pressure of the air at the beginning of the stroke, and its expansion during the interval prior to the release of the exhaust. The heat of the burning gas ef-

the system are: automatic starting of the motor, simultaneous starting of the motor and the car, propulsion by compressed air alone, propulsion by internal combustion alone, propulsion by the "mixed" system, in stantaneous engine braking, and instantaneous engine reverse.

The braking effect is secured by permitting the car to drive the air compressor through the motor, when both gas and air are shut off, while the reversal may be accomplished by means of the air alone. Obviously, with such an arrangement, the need of the usual clutch and change gears is reduced to a small and merely nominal capacity.

Kerosene for Removing Rusty Nut.

It seldom happens that a nut which is "rusted" in place cannot be removed if soaked for a sufficient length of time in kerosene oil. It is often difficult to apply the oil in such a way that it will reach the roots of the thread, however, and frequently the rust remains untouched even after a long period of treatment, on this account. A good way of insuring its proper distribution is to bind a thread of cotton waste about the affected part and saturate it with oil. When this has been done it is possible to keep the rust in a moistened condition for as long a period as may be required to loosen it.

FRANKLIN SHOW AN OBJECT LESSON

Cars, Materials and Processes Included in the Exhibition—Interesting Tests Given with Ingenious Devices.

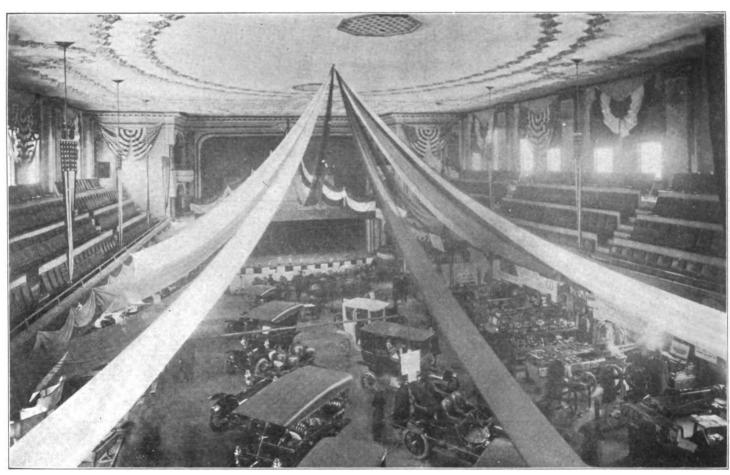
For originality of conception, thoroughness of execution and in itself an idea of real value to every one interested in automobiles, it is doubtful if there has ever been a more effective demonstration than

relation, were placed at the foot of the runways. To the front axle of each was attached a string leading to the top of the structure and to the ends of which were attached weights of equal size. These weights, evenly released, caused the machines to start to mount the grade, and while it could be seen that both started evenly, the Franklin, of course, shot away from its competitor in impressive style. To show that there was no deception regarding the matter the machines were transferred, as were like

ress, with picture after picture of the new factory and its various impressive completion. The stage, of course, was darkened by the dropping of the curtain and the lecture itself was of interest.

Admission to the building, to the lecture and everything else was free and that it was appreciated was proven by the fact that on Thursday, the opening day, the attendance was estimated at about 6,000.

Incidentally the only thing within the hall not a part of the H. H. Franklin Mfg.



GENERAL VIEW OF THE STANLEY SHOW IN ALHAMBRA HALL, SYRACUSE

that given last week by the H. H. Franklin Mfg. Co., of Syracuse, N. Y. In brief, it was a "Franklin Show"; the Alhambra, the largest local hall being hired for the purpose. Within its walls was a display of Franklin cars of every style and kind and in addition, exhibits of practically everything that enters into their construction; the processes by which everything from the raw steel to the finished car is selected and tested and parts in bewildering confusion shown in all stages of completion.

Several demonstrating devices also formed part of the show. Quite the most ingenious was one designed to test the Franklin principle of light weight. It was a toboggan sort of an affair with two runways. Two miniature machines, one a Franklin, the other designed to resemble a water-cooled car of the same power and whose weight was figured out in corresponding

wise the weights, and upon request each were weighed and the comparison proven. It was a most interesting experiment and one that the company intends to have placed in all of their branch houses, where the doubting Thomases can dissect it to their heart's content.

Another interesting demonstration was a Franklin car, each wheel of which was placed upon separate scales, the total proving the advertised weight and showing its distribution.

The large stage itself was transformed into a lecture room with a platform mounted on one end. On this platform was a large stereopticon upon which were thrown large sized pictures showing the development of the automobile as a vehicle, a lecturer reciting its history and many interesting facts concerning it. Later, was shown the beginning of the Franklin company, its prog-

Co. was a tea booth, presided over by several ladies, the proceeds of which were devoted to a local charity.

From this new form of publicity it would appear that sales manager V. E. Minich is bringing to bear some of the methods of the National Cash Register Co., with which he was long connected.

The Horn for the Dilemma.

When it is absolutely necessary to have a funnel, in the event of a roadside "panne" where none of the regular sort is available, it is a trick requiring but a moment's time to remove the horn from the car, disconnect it, and take out the reed, after which, it will be found to serve the purpose very well indeed. In many instances, it will be more useful than the rolled-up paper cornucopia which is usually suggested at such times.

HINTING AT HEAVIER TAXATION

State Engineer Skene Claims that Automobiles Increase Road Expense—What

He Says in Annual Report.

Taxation of automobiles is likely to be one of the most thoroughly discussed topics before the New York State legislature during the current session. Of course the outcome is problematical, and it may be that the scheme of graded taxation proposed by the New York State Automobile Association will be adopted only so far as the matter of gradation is concerned, and with heavier rates. That such a probability is a strong one is indicated in the annual report of Frederick Skene, State engineer and surveyor.

"I deem it my duty," Mr. Skene says, "to call your attention to the injurious effect of rapidly driven power vehicles upon the public highways of this State, especially those of macadam surface. The question cannot longer be ignored." He says further:

"Ten years ago the Higbie-Armstrong bill became a law, as the first notable effort of the State to break away from the antiquated methods in vogue during the previous century and give to its citizens well built and permanent highways in return for the money expended on their construction. This law was not placed upon the statute books without a 20 years' struggle of the few advocates of improved highways, led by the League of American Wheelmen, then a strongly organized body of users of roads.

"The natural reluctance of the people to try expensive experiments and to make costly innovations—although the success of macadam roads had been proved in adjoining States-made necessary a long campaign of education before the law could be passed. The leading argument was that the farmers would be better provided for in marketing their crops. To this end they were permitted by the law to petition for a section of highway to be built in front of their holdings and were assessed according to their benefits, or practically according to their frontage, in partial payment therefor. At that period the use of the highways by automobiles to any considerable extent was neither foreseen nor considered.

"It is only within the last two or three years that the remarkable increase in the number of automobiles as well as in their weight and speed has made noticeable their effect upon the public highways. This damage appears to be caused in two ways—first, by the so-called suction of the broad rubber tire of a swiftly moving wheel upon the finely comminuted material of the wearing surface and binder, causing it to be displaced and thrown out to the rear, thus exposing the jagged corners of the

top course of macadam, which are in their turn reduced to fragments and removed from place by the same agency; and, second, by the direct picking action of numerous devices now used to roughen the surface of the tire, and thus obtain a stronger hold upon the smooth surface of the finished

hold upon the smooth surface of the finished road; by the use of chains and other appliances, termed in general non-skidding de vices and intended to prevent side-slip of the wheels, especially in wet weather, or at high speed, or at turns in the road.

"It is to be observed that speed is an essential element in causing the injury in both the cases named. The higher the speed of the machine the greater is the injury inflicted. The law now permits no greater speed than 20 miles an hour upon the open highways of the State, yet it is a matter of common knowledge that this law is "more honored in the breach than the observance."

Raiding Unattended Automobiles.

Raids on cars left standing in the streets of New York City were begun under direction of the street cleaning department on the evening of January 22. The first onslaught was made from Station B in West Fifty-second street, under the lead of District Superintendent Denice, who rode in a buggy. A truck also was included in the raiding equipment.

The first capture was a car owned by the Automobile School of America. It was found "derelict" at Forty-ninth street and Seventh avenue. The detachment was halted, the truck was backed to the automobile, the two vehicles were connected and the chauffeur who accompanied the raiders took his place at the wheel of the car. The march to the encumbrance yard at West Fifty-sixth street was begun despite the protests of a man representing the school, and the procession was accompanied by the usual crowd.

The raiding party did not interfere with private automobiles nor with those standing in the streets before the salesrooms of agents. Visits were made, however, at each of the garages, which previously had been notified that it is a violation of a city ordinance to leave an automobile in the street unattended for a longer period than fifteen minutes. According to Deputy Street Cleaning Commissioner Edwards, even the car of a physician thus left is liable to seizure.

Plan to Raise Funds for Sign Boards.

Dealers in San Francisco have hit upon a new plan to raise money to carry on the signboard work in that section of California. The scheme is to interest owners of automobiles to the extent of giving up the pleasure of riding one day during the next season and pay the cost of gasolene and oil for a 100 miles trip. The idea is to run the cars around the bay and charge \$5 per person for the trip. If a majority of owners offer their cars for the purpose something like \$30,000 can be raised.

AUTOMOBILIST IN FELON'S CELL

Severe Sentence for Newark Dentist Whose Recklessness Cost a Life—Stern Warning for Others.

For the first time in this country, an automobilist who had caused a fatal accident and who, lacking the courage to face the consequences, had hurried away, leaving his victim to his fate, has been given exemplary punishment. Dr. Walter H. Morris, a dentist of Newark, N. J., is the man concerned. He will have 18 months in the Essex county penitentiary in which to reflect on the results of his folly and inhumanity.

Morris caused the death of Marcus J. Jacobs, a theatrical manager, by running him down on Broad street, in Newark, on September 26, 1907. Some time after pleading "not guilty" to an indictment charging him with manslaughter, Morris withdrew his plea and pleaded "non vult." When arraigned before Judge Ten Eyck for sentence on the 29th ult., his counsel, Samuel Kalisch, made an appeal for clemency, which was met by the request of Public Prosecutor Young for the imposition of a sentence sufficiently severe to act as a deterrent upon automobilists addicted to reckless driving. In acceding to the prosecutor's request Judge Ten Eyck made it plainly evident that, while accepting the defendant's disclaimer of criminal intent, he regarded his conduct in the matter as of a criminal character.

"After drinking intoxicating liquors with your companions," he said, "you drove your high powered automobile at great speed through Broad street, in the center of the city, at about 4.30 p. m., when the street was crowded with people. Mr. Jacobs had just stepped off a trolley car and was about to go to the sidewalk when your machine struck him with great force, while you were going at high speed, and without giving any warning signal. You knew he had been struck and probably seriously injured, but continued at high speed down Broad street and out of the city, doing further damage later on.

"It was not until several days later that you concluded to surrender yourself to the public authorities. Such conduct was not only the extreme of disregard for the safety of others, and a cowardly violation of common decency, but your recklessness supplied the place of the civil or criminal intent required to constitute a criminal act, and makes you responsible under the criminal law for manslaughter. Both as a punishment to you and a warning to others using the highways that gross recklessness resulting in injury to others will be adequately punished it is the duty of the court to impose a severe penalty in this case.

"The sentence of the court is that you be

confined for the term of eighteen months in the Essex county penitentiary and from thence until the costs are paid."

His plea of "non vult" deprives Morris of the right to appeal from this sentence. In addition to serving his time in prison he has to answer in a civil suit for \$100,000 damages, brought by the administrators of the Jacobs estate, and in another for \$5,000 damages, brought by Louis Shapiro, whose peddler's wagon his car demolished during his flight from the scene of the more tragic accident.

Enormous Penalties Proposed.

Of the many automobile measures placed before the Massachusetts legislature to be considered during the present session the more important, including those bills that are likely to receive favorable consideration have been outlined in the Motor World. Among the others there are some that, even in Massachusetts, have about as much chance as a snowball would have in a place where the fuel supply is said to be inexhaustible. Some of them are worthy of mention for no other reason than their extreme absurdity.

One bill of this sort is evidently the production of a mind dominated by a rabid form of motorphobia. It provides that a motorist may be fined \$1,000 and imprisoned for twelve months on conviction of injuring a person or a corporation; the fine is increased to \$3,000 and the term of imprisonment to three years for gross negligence; and for causing loss of life the fine is made \$10,000, with imprisonment for ten years. The same bill provides a fine of \$1,000, with one year's imprisonment for not keeping to the left in passing a carriage going in the same direction! The bill has been referred to the committee on roads and bridges, where it is believed to be as safe as if in the hands of a committee on the legislative morgue, if such a committee were in existence

The bill proposing to give to the select men of Nantucket the power to exclude automobiles from the island by closing roadways in the town, without possibility of interference by the State highway commission, probably has got as far as it will go. There is some surprise that it was passed by the House of Representatives, and no expectation that it will get through the Senate. That it is special legislation is not more apparent than that it would open the way for taking the automobile question out of the hands of the legislature and placing it at the disposition of the various city councils and town boards to settle as each might see fit. If Nantucket should be granted what the selectmen have sought to obtain through this bill there are other old fogy towns that would bob up with their "me too!" Even if every city and town should not ask for such legislation, there would be a sufficient number to destroy the uniformity of automobile regulations in Massachusetts.

DANGER IN THE FORCE OF HABIT

Experience of a Motorist Who Suddenly Switched Types of Transmission— How He "Put His Foot in it."

They were sitting in a corner of the club room and tales of personal experiences served to kill time:

"Did you ever switch suddenly from your sliding gear type and try to drive a car equipped with a planetary transmission?" asked one of the old timers, who was himself a driver and not dependent on the professional chauffeur.

Receiving no reply, he continued, "I did. I tried it, with disastrous results. The incident made so decided an impression on me that I remember the slightest detail.

"I was sitting just about where I am now one day a year ago, when I was summoned to the phone, an intimate friend was on the other end of the wire, and he unfolded a terrible tale about being swindled in the purchase of a new car, had had a lot of trouble with it the day before, and finally in the late hours of the night had left it in a barn on the outskirts of the city and was very anxious for me to look it over before some dishonest employe of the manufacturer got a chance to make a temporary repair and then prove the car was all right. My friend couldn't go with me, he said, as he was subpoenaed in court.

"I consented readily enough and an hour later was beside the car. I found there was nothing worse than a loose battery connection, which had, of course, caused irregular firing, and having tightened this, I soon had the engine turning over.

"As he and I stabled in the same garage I thought I might as well run the thing home for him. I got into the seat and though, of course, I knew it was a planetary I unthinkingly pushed the left pedal, with the involuntary impulse we have before releasing the emergency brake, and the car began to back up. I had my wits about me in a moment and realized, after I had given one of two more pressures with the intention of getting the clutch out, that there was no clutch, and if I didn't get off that pedal quick there would be 'something doin'.' I released it only to find that the release spring was broken and I would have to kick it off. Well, that was easy, and I had control before anything happened.

"My trip downtown was without incident. There were many awkward moments when I reached the busy streets, but I finally arrived safely at the garage and drove in.

"There was a little manocuvering necessary to get into the right space, and my left foot, which I had kept religiously under me, sitting on it lest it remembered its habits and sought to monkey with the clutch which wasn't there, was again put in commission. I backed as far as I wanted to,

then released the pedal, but the broken spring got in its fine work and I kept on backing.

"The necessity of doing something, and doing it quick, was responsible for the return of the involuntary motion of pushing the left pedal, and as I did this I crashed into the glass door and framework of the office, doing about \$10 worth of damage to glass, woodwork and fixtures; with the crash I pushed harder than ever, and fortunately, I stalled the motor."

"Supposing the motor hadn't stalled?" queried a young man who rode only when his chauffeur permitted him to.

"Well," responded the other, "I would have definitely settled the problem that has puzled science for many generations as to what happens 'when an irresistible force meets an immovable body," and the speaker motioned for the waiter with a comprehensive gesture.

How the Chauffeur Cleaned the Coat.

A well known New Yorker, whose prominence and enthusiasm as an automobilist makes him a conspicuous figure in the news items of the daily press, recently bought an imported rain coat of fine texture and light color.

He had used but a few days when one rainy morning, while wearing it he sought to satisfy his curiosity concerning the queer actions of his car by a personal observation of some of its interior mechanism with the result that a large, generous application of grease was apparent on the new coat.

Arriving at the office he handed the coat to his chauffeur with orders to clean it.

The chauffeur, however, was without experience in this line of work, but knowing that gasolene was used to remove oil and grease from engines he figured it would do equally well in this case and placing the garment in a large basin, covered it with gasolene and went to dinner.

Returning about an hour later he rubbed out the spot and grasping the coat by its sleeve lifted it from the pan only to find that the glue used in the seams had dissolved and the rain coat was in pieces. He hung these on nails side by side and awaited developments.

A day or two later the owner in passing through the garage observed the decoration. With quick comprehension he realized what had happened and that his rain coat was no more. There was no word of reproof. In half sorrowful tones he remarked, "Well. there's thirty dollars more gone to the devil," and the incident was closed.

Motor Postal Delivery on Large Scale.

Motor postal delivery on a large scale is being planned in Nuremberg, where no less than thirteen mail wagons will be put into service during the coming summer. A city garage and repair shop are already in process of erection, and it is planned to increase the equipment later on as the service demands an extension of facilities.



The Week's Patents.

871,797. Cooling System for Internal Combustion Engines. Gustavus Green, Bexhill, England, assignor of one-fourth to Francis Pelham Clinton Hope and one-fourth to Joseph Miller, Bexhill, county of Sussex, England. Filed Sept. 15, 1905. Serial No. 278,597.

1. In an internal combustion engine the combination with the cylinder of a water jacket, a radiator connected with the same and projecting beyond the surface of said jacket, said radiator comprising sets of adjacent channels for the circulation of the water communicating with the upper and lower parts of the jacket, and confined to the space immediately around the sides of the jacket, and being distributed around the same in such manner as to efficiently utilize the available space round the jacket.

871,807. Rotary Engine. Jay E. Lehman, Canton, Ohio. Filed March 20, 1907. Serial No. 363,359.

1. In a rotary engine, a case, a rotatable cylinder therein, a piston in the cylinder, annular channels having correspondingly varying depths in the end walls of the case, an endwise movable non-rotatable screw in the cylinder having its ends abutting the bottoms of the channels, and means connecting the screw with the piston whereby the piston is operated by the endwise movement of the screw.

871,868. Tire Cleat for Traction Wheels. William Galloway, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed Feb. 28, 1907. Serial No. 359,706.

A traction wheel tire cleat, comprising the combination with a tire of cleat members adjustably spaced apart, said cleat members embracing and overlapping the tire tread and having inwardly projecting jaws adapted to be secured about the tire's opposite edges, the overlapping portions of said cleat members having perforations in registration with each other, a bolt adapted to be secured within the said registering perforations and across and over said tire tread, and means for removably and adjustably spacing said cleat members apart and securing them about said tire.

871,881. Rotary Explosive Engine. Adolf Montan and Joseph Seholm, Newark. N. J. Filed June 14, 1907. Serial No. 378,916.

1. A motor comprising a support, a cylinder fixed thereon, pistons operating in the opposite ends of the cylinder, a rotatable casing mounted on the cylinder and entirely inclosing the same, and means for driving the casing from the pistons.

871,883. Burner for Explosion Engines. Peter McCusker, Galesburg, Ill. Filed May 22, 1907. Serial No. 375,172.

In a burner for explosion engines provided with a heating chamber and an ignition pipe therein, a removable heat reflector adapted to be secured over the open end of the heating chamber, being formed of a single thin plate of resilient metal and consisting of a central hub smaller than the end of the chamber and outward projecting arms bent downward at their ends to clasp the outer sides of the walls of the chamber.

871,886. Reinforced Corner for Vehicle Bodies. David M. Parry and Thomas H. Parry, Indianapolis, Ind., assignors to Parry Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Sept. 18, 1906. Serial No. 335,099.

1. In a vehicle corner, a standard notched

on its inner side, an end member notched on its outer end to receive the notched end of the standard, a fransverse member wider than said end member notched on its inner face at the end to receive the standard and end member flush with its end, and a metal plate covering both of the outer sides of the corner thus formed said plate being continuous from one side to the other around said corner.

871,920. Vehicle Spring. Arthur Falkenhainer, St. Louis, Mo. Filed Dec. 26, 1906. Serial No. 349,367.

1. In a vehicle spring, the combination with a main spring, of a coiled auxiliary spring having a terminal coil provided with an arm arranged for slidable engagement with a member of said main spring, and means whereby said terminal coil is rigidly and immovably secured to said main spring member, substantially as set forth.

871,930. Patch for Pneumatic Tires. Gustaf Hagstrom and Emanuel Hagstrom, Lindsborg, Kan., assignors to The Hagstrom Bros. Manufacturing Company, Lindsborg, Kan. Filed Sept. 24, 1906. Serial No. 335,943.

1. A patch of the class described comprising a band to go around an inner tube having clips at its ends to engage the edges of an outer tube and provided with a flap forming an extension of one end to lie between the inner tube and a wheel rim, substantially as described.

871,945. Tire. Robert M. Merriman, Youngstown, Ohio. Filed March 13, 1907. Serial No. 362,168.

1. In combination, a soft tread tire, metal reinforcements embedded in opposite sides thereof, each reinforcement consisting of a number of strands twisted together, and lacing embedded in the tire and connecting said reinforcements and passed between the strands thereof to maintain fixed position.

871,946. Combined Speed Indicator and Recorder. George E. Mirfield, Joliet, Ill. Filed March 5, 1906. Serial No. 304,298.

1. In a device of the class described, in combination with a clock mechanism, a face plate surrounding the arbor for the hour hand, and revoluble therewith and adapted to revolve a chart, a stationary transparent clock face having the numbers marked thereon in a ring in front of the face plate, and a recording arm carrying an inscribing instrument, the latter being movable under the transparent clock face and outside of the ring of hour numerals, substantially as described.

871,949. Ball Bearing. Paul J. McCullough, St. Louis, Mo. Filed Feb. 20, 1907. Serial No. 358,401.

1. A ball bearing comprising a member consisting of a single piece which is provided with an approximately channel shaped groove that constitutes ball races, a coperating member composed of a plurality of parts that constitute co-operating ball races, means formed in sections and arranged between said parts to hold them separated, and a plurality of rows of balls arranged between said races; substantially as described.

871,973. Multipart Mold for Pneumatic Tires. Friedrich Veith, Veithwerk, near Hochst, Germany. Filed Jan. 28, 1907. Serial No. 354,413.

1. A mold for pneumatic tire covers comprising a core having an internal chamber and a gutter or depression at the lower part of said chamber for the reception of

condensation water, and a drain pipe leading from said depression.

872,012. Oil Cup Lubricator. William P. Phillips, Boston, Mass. Filed Feb. 6, 1907. Serial No. 356,023.

1. A lubricator having a valve spring pressed to its seat, said valve having a cap thereon, a valve casing, a screw threaded connection between said cap and the valve casing, means engaging said cap to lift the valve from its seat, a cover for the lubricator and a coiled spring interposed between and bearing against the cover and the cap.

872,031. Automobile Body. Willie O. Thomas, Riverside, and Harry G. Moore. Chicago, Ill. Filed Aug. 29, 1906. Serial No. 332,412.

1. An automobile body having sidebodies formed of sheet metal extending continuously both above and below the floor plane of the body throughout the principal length of the body, and laterally outstanding structural members rigidly secured to said side bodies below said floor plane and forming reinforcements to the transverse and vertical strength of the side bodies.

872,040. Rotary Pump. Gunnar Anderson and Richard Lundin, New York, N. Y. Filed Aug. 21, 1907. Serial No. 389,443.

1. A pump comprising a cylindrical casing having head plates secured to the opposite ends thereof, said casing being provided in its opposite ends with annular chambers and said head plates with corresponding annular chambers in communication therewith, said casing being also provided with a central longitudinal cylindrical chamber, a drum or cylinder mounted in said chamber and of less diameter than said chamber and provided at one side with a longitudinal piston member adapted to closely fit the walls of said chamber, said drum or cylinder being also provided with a shaft by which it is rotated, a plurality of longitudinally arranged cylindrical valves located in said casing and geared in connection with said shaft, said valves being positioned so as to fill the space between the outer walls of said chamber and the drum or cylinder mounted therein, said valves being also provided with longitudinal recesses, and a plurality of longitudintl chambers in said casing, said chambers being arranged in pairs at the opposite sides of said valves and being provided with ports or passages which communicate with the chambers in which said valves are placed, one of the heads of the casing being provided with an inlet pipe in communication with the annular chamber formed therein, substantially as shown and described.

872,075. Sparking Device. Harry A. Miller, Pasadena, Cal., and Benjamin G Gilbough, Chicago, Ill. Filed Feb. 14, 1906. Serial No. 301,103.

1. An ignition device, for the purpose set forth, comprising a cylinder adapted to communicate with the engine cylinder, a spring held gas actuated piston movable therein, a vibratory electrode extending above the base of and outside of said cylinder, a gas tight bearing for said electrode, and means connected with the piston and with the outer end portion of the vibratory electrode.

872,096. Means for Preventing Side Slip in Pneumatic Tires. Louis E. Treffiere



and Victor J. Jehin, Paris, France. Filed March 9, 1906. Serial No. 305,189.

In a device of the class described the combination of a plurality of strips secured to the tire tread, said strips being located upon the tire in a plane co-incident with the plane of rotation thereof and in aligned rows, the strips of each row being spaced apart longitudinally at their ends and disposed upon the tread in staggered relation to bring said spaces between the ends of the strips of one row out of transverse alignment with the spaces of strips adjacent rows, said strips being provided with laterally projecting attaching ears formed to provide intervening recesses of the strips of adjacent rows.

872,133. Rotary Motor. Justus R. Kinney, Dorchester, Mass. Filed April 29, 1907. Serial No. 370,967.

1. In a device of the class described, the combination of a casing having a cylindrical chamber; an eccentric piston therein; a continuous peripheral band thereon; and means whereby said band may be adjusted about the periphery of said piston and clamped in adjusted position.

872,164. Gas and Gasolene Engine. Earl E. Wright, Mansfield, Ohio. Filed Oct. 27, 1906. Serial No. 340,833.

1. In an engine of the class described, a housing in two portions and having half bearings in their adjacent faces, cylinders mounted upon said housing, the rods spaced apart and extending through said housing and connected to said cylinders, pistons operating in said cylinders, piston rods connected to said pistons and provided with transverse slotted cross heads slidably engaging said tie rods, and a shaft journaled in said housing bearings and provided with cranks operating in said slotted heads.

872,186. Speed Recording Instrument. Cascious H. d' la Monte, Philadelphia, Pa., assignor, by mesne assignments, to International Speed Register Co., Philadelphia, Pa., a Corporation of New York. Filed March 21, 1906. Serial No. 307,235.

1. A speed recording instrument for the purpose set forth having a punching mechanism comprising a reciprocatory punch for puncturing a dial to form a record, a casing for the punch, and a plurality or combs having the outer ends thereof secured to the wall of the casing, said combs projecting inwardly, suitably spaced apart and adapted to have the dial enter between the inner ends thereof, the tines of the combs constituting guides for the punch, combined with means for actuating the punch and for intermittently varying the size of the punctures during the operation of the instrument.

872,188. Cab Fare Indicator. Charles Mascart, Paris, France. Filed Oct. 13, 1905. Serial No. 282,665.

The combination of a drum provided with means to indicate the amount of fare paid, a ratchet wheel fixed to said drum, a spring for imparting movement to the drum when the ratchet wheel is released. a lever provided with a detent adapted to engage the ratchet wheel to prevent the rotation thereof in one direction, a pawl engaging said ratchet and adapted to prevent the rotation thereof in the same direction and further adapted to impart an impulse to the ratchet wheel in an opposite direction, a lever carrying said pawl and having an upwardly extending arm adapted to be moved into engagement with the lever carrying the detent, thereby shifting said detent out of engagement with the ratchet wheel and further shifting the pawl out of engagement

with the ratchet wheel, a pair of cam members, one of said members adapted to engage said arm for moving it into engagement with that lever which is provided with a detent, and the other of said members adapted to engage said arm for lowering it, thereby shifting said pawl to impart an impulse to the ratchet wheel, and means for retaining the retent and pawl in engagement with the ratchet wheel when said cam members are out of engagement with said arm.

872,213. Battery Support for Automobiles. Samuel R. Bailey, Amesbury, Mass. Filed Jan. 4, 1907. Serial No. 350,734.

1. In combination with an automobile frame, a base adapted to support the batteries thereon, a series of three suspension rods having heads at each end provided with oppositely disposed spherical shaped faces, said frame and said base each having apertures, through which said rods pass loosely, and having oppositely disposed recesses about said apertures, the bottoms of which are adapted to receive the spherical faces of said heads to permit said base to swing freely in any direction with relation to said frame, as and for the purpose set forth.

872,220. Transmission Gear. Allen P. Boyer, Goshen, Ind. Filed April 1, 1907. Serial No. 365,707.

1. The combination with the axle shafts. of gears thereon; a pair of gear shafts arranged transversely of said axle shafts; sleeves splined upon said gear shafts; pairs of gears revolubly mounted on said sleeves adapted to alternately engage said axle gears as said sleeves are shifted; pairs of said axle ratchet clutch members through which said gears are connected to said sleeves, splined thereon; springs for holding said clutch members yieldingly in engagement with said gears; a pivoted lever connected to said sleeves for simultaneously shifting them in opposite directions, whereby the desired gears thereon are brought into mesh with said axle gears; a shifting link for said lever; a driving shaft; a pair of driven shafts arranged one at each side of said driving shaft and parallel thereto; combination universal and slip joints for connecting said driven shafts to said grant shafts; adjustable driven shafts to said gear shafts; adjustable bearings for said driven shafts; connecting links for said bearings whereby they are adjusted in unison to throw them toward or from said driving shaft; a stop on one of the said connecting links for said adjustable bearings arranged to engage the operating link for said sleeve shifting lever operating link for said sleeve shitting lever; a plurality of friction gears of different di-ameters splined upon said driving shaft; means for shifting said gears on said driv-ing shaft; and a plurality of gears of dif-ferent diameters on said driving shafts, adapted to be brought into driving engagement with said gears on said driving shaft.

872,226. Spring. Chauncy T. Edgerton, Richmond Hill, and Welford J. Golden, Oswego. N. Y. Filed Sept. 10, 1907. Serial No. 392,139.

1. In a leaf spring, an auxiliary plate of less camber than the working plates of the spring and tending by its reaction to substantially reduce the free height of the spring.

872,246. Fastening Device for Pneumatic Tire Protectors. Roy H. Morris and Elvin E. Townsend, Oakland, Cal. Filed June 28, 1906. Serial No. 323,833.

1. In a fastening device for pneumatic tire protectors, a pair of blocks, each provided with a perforated ear and a longitudinally disposed flange, said perforation being conical, and the flanges being opposite each other, whereby a recess is formed between the flanges when the blocks are in position, one of said blocks being provided with a transverse screw threaded aperture, and the other one with a screw threaded lug adapted to fit in said aperture and hold said blocks together with said flanges in engagement with the rim of a wheel when in position, a nutted bolt through each ear and a hooked plate pivotally secured to the lower end of said bolt adapted to receive the perforated edge of the tire protector.

872,311. Vehicle Wheel. Emil Sutherland, Hollywood, Cal. Filed Nov. 2, 1906. Serial No. 341,728.

1. A vehicle wheel having a non-deformable rim; carrying springs interposed between the spokes and the rim and workably connecting the same together; annular plates forming hubs and carrying the spokes pivotally connected thereon; compensating springs extending from the inner end of one spoke to the inner end of another spoke, and said springs being keyed to one spoke and having a sliding fit in a socket in another spoke.

872.336. Internal Combustion Engine. Lucius T. Gibbs, Hempstead, N. Y. Filed May 2, 1906. Serial No. 314,742.

1. In an internal combustion engine, the combination of a cylinder, a piston, said cylinder having inlet and exhaust ports uncovered by the piston as it approaches the limit of its forward stroke, the piston having an apertured lip whereby the exhaust port after being opened, is closed during the continued forward movement of the piston, and means to withdraw the burned gases from the cylinder while the exhaust port is closed and the inlet port is opened.

872,362. Pneumatic Spring and Shock Absorber for Motor Vehicles. Albert L. Muren, Belleville, Ill. Filed Oct. 18, 1906. Serial No. 339,432.

1. In a vehicle, the combination with an axle and frame, of an upwardly projecting compression member suspended beneath said axle from said frame, a resistance member beneath said axle above said compression member and slidingly connected therewith, and a pneumatic shock absorbing cushion located between said compression member and said resistance member; said resistance member; said resistance member being of box shape and having a detachable wall, substantially as set forth.

872,453. Muffler. David Reid. Ithaca, N Y. Filed July 22, 1904, Serial No. 217,-680½. Renewed June 19, 1905. Serial No. 266,044.

1. In a muffler, the combination of an expansion chamber, a passage for the flow of gas opening into said chamber, means disposed in said passage for retarding the flow of gas therethrough, and means for creating a partial vacuum in said chamber.

872,472. Fastening for Resilient Tires. Otto G. Stole, Chicago, Ill. Filed Sept. 10, 1906. Serial No. 338,918.

1. A resilient tire attachment comprising a main plate metal ring having a concave peripheral portion, marginal beads at the sides of said peripheral portion, and a laterally and inwardly extending attaching web, said peripheral portion, marginal beads and attaching web being integrally formed, a supplementary plate metal ring having a laterally and inwardly curved form and its outer edge tucked into the recess between the adjacent bead and the main ring for retention, and bolts passing through the

parts and through the wheel rim to secure the parts together, substantially as set forth.

872,505. Carburetter. George H. Gere, Utica, N. Y. Filed March 30, 1906. Serial No. 308,865.

1. The combination of a case having a depression in the bottom thereof, means for admitting a current of air to the case, means for removing a combustible mixture from the case, a vertically adjustable sleeve in the case, a nozzle in the case, an air tight tank above the case, a pipe connecting the bottom of the tank and the nozzle and having means for longitudinal expansion, a pipe extending from the depression to the upper part of the tank and vertically adjusted relative to the case by means of the sleeve.

872,512. Power Transmission Device. Joseph W. Hays, Chicago, Ill. Filed March 25, 1907. Serial No. 364,422.

1. In a clutch mechanism the combination with a revoluble driving member and a concentric revoluble driven member having aligning axes, of a series of segmental shoes arranged in circumferential order one after the other and connected to the outer one of said members, and means for causing said shoes to engage the other member one after the other.

872,527. Motor Starter. Adolph W. Manz, Chicago, Ill., assignor to Paul H. Manz, Chicago, Ill. Filed Feb. 26, 1906. Serial No. 302,922.

A starting device for motors, in combination with the motor main shaft, a lever loosely mounted on said shaft, split bearings on said shaft embracing said lever, a split ratchet wheel secured on said shaft adjacent to said lever, pulleys mounted on said lever near its ends, operative means for making traction upon said lever, said operative means consisting of a flexible and a yielding portion, said flexible portion passing over said pulleys and provided with a handle, a pawl pivoted to the lower and forming a link between the said portions of the operative means for the lever, means



Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

"A Good Thing and a Ready Seller"



PROVIDENCE, R. I., Jan. 28, 1908

THE BICYCLING WORLD Co.,
154 Nassau Street, NEW YORK.

DEAR SIRS:-

Please send me at once two dozen copies of Care and Repair of Motorcycles. I sold the first copy fifteen minutes after its receipt. I am sure the book will prove a good thing and a ready seller as during the last two years I have had lots of inquiries for something of the sort.

B. A. SWENSON.

Should be in the hands of every repairman and rider,

64 pages, chockful of useful advice and suggestion. Coated paper; linen cover.

THE BICYCLING WORLD CO. 154 Nassau Street, NEW YORK

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.

In capitals, 25 cents per line.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

W ANTED—Traveling salesman, experienced in selling large cars. Territory east of Pittsburg. Give reference and experience. Address N. M., Box 649, New York City.

FOR SALE—Model K Cadillac runabout, excellent condition, complete with top, lamps and generator. THE HARTFORD RUBBER WORKS CO., Hartford, Conn.

FOR SALE—Absolute closing out sale of the largest stock of new and second-hand automobiles in the United States. Write for Clearance Sale List No. 21. Now is the time to buy. ROCHESTER AUTOMOBILE CO., Jos. J. Mandery, Prop'r., Rochester, N. Y.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.





Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order.

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

50-60 H. P. \$5,750 Equipped Lic. Under Selden Pat. Guaranteed One Year Palmer & Singer Mfg. Co. 1620-22-24 Broadway, New York 1321 Michigan Avenue, Chicago, Ill.

Digitized by Google

for retaining the lever in inoperative position, and means for preventing the untimely operation of said lever.

872,571. Internal Combustion Engine. Fritz Moser, St. Aubin, Switzerland. Filea Dec. 14, 1906. Serial No. 347,812.

In an internal combustion engine, the combustion of valve-actuating devices; a shaft for operating the same; a casing for said devices; a cover for said casing, said cover being formed on its outer face with an interrupted annular rib and said shaft projecting through said cover within said rib; an electric ignition device mounted upon said rib; and means mounted on the projecting end of said shaft for operating said ignition device; the interruption in said rib permitting the oil which exudes from said casing along said shaft to flow away from said ignition device.

872,645. Resilient Tired Wheel for Self-Propelled Vehicles. Edwin M. Carhart, Providence, R. I. Filed Feb. 16, 1907. Serial No. 357,625.

1. In a wheel of the character described, the combination with the rim, a pair of oppositely disposed annular metal plates rigidly secured to the front and rear sides of the rim, and a continuous annular rubber tire member having a substantially concavo-convex form cross-sectionally seated in and being supported by said plates, of a plurality of short radially extending airtight cylinders arranged around and rigidly secured to said rim member, a suitably packed piston or plunger block movably mounted in each cylinder, its upper or head portion being enlarged and fitted to the

adjacent concave part of the tire, and a continuous hoop or band of metal extending circumferentially around and being secured to the heads of the pistons, all constructed, arranged, and adapted for operation substantially as hereinbefore described.

872,732. Automobile Air Brake. James T. Johnson, Memphis, Tenn. Filed Oct. 22, 1906. Serial No. 339,937.

1. In combination with a motor driven vehicle, and brakes for said vehicle, a brake cylinder having a piston, connections between the rod of said piston and the said brakes, an air reservoir, a brake valve casing, and a brake valve in said casing, connections between said air reservoir and the brake valve casing, and between said brake valve casing and the brake cylinder, and a single actuating element for controlling the motive power of said vehicle and said air brake valve.

872,774. Motor Car. Cornelius P. A. Van Ferls and Josephine M. Kneeland. New York, N. Y. Filed May 24, 1907. Serial No. 375,505.

1. A car body supporting frame for a motor car and comprising opposite side frame members each of which is depressed midway of its length, and a supplementary frame provided with a rearward cross bar connected with said side frame members where depressed and provided with a downwardly bent forward cross bar connected with such members above said depressed parts, and longitudinal bars forming part of the supplementary frame and disposed in a plane substantially parallel with the depressed parts of the side frame members and

connected with both parts of the side frame members and connected with both crossbars.

872,820. Air Guide or Steering Device for Automobiles. James T. Johnson, Memphis, Tenn. Filed Oct. 8, 1906. Serial No. 337,-909.

1. The combination with the running gear of an automobile, of a reservoir for fluid under pressure, a fluid receiving cylinder divided into two compartments each in communication with the reservoir, pistons in said compartments of the fluid receiving cylinder connected with the steering wheels, a steering post, and a valve interposed between the fluid receiving cylinder and the reservoir and controlled by said steering post to admit air from the reservoir to said compartments of the fluid receiving cylinder.

872,825. Apparatus for Checking or Deadening the Vibrations Imparted to Suspended Vehicles. Arthur Krebs, Paris, France, assignor to Société Anonyme des Anciens Establissements Panhard et Levassor, Paris, France. Filed March 29, 1906. Serial No. 308,769.

1. An apparatus of the class described, comprising a case, a movable member arranged within the case, superimposed washers alternately connected to the movable member and the case, an elastic element co-operative with the case and the movable member, and cam elements, one cam element carried by the case and the other by the movable member, and the cam faces of each adapted to traverse one another.



KINWOOD AUTOMOBILE PARTS.

ONE QUALITY—THE BEST.

OUR LEADERS:
Kinwood Perfection Radiators
and
Kinwood Mechanical Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

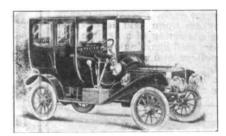
Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc.

Large facilities and dependable deliveries.

K. FRANKLIN PETERSEN, 166 Lake St., Chicago, Western Representative. THOMAS J. WETZEL,
I Warren St., New York,
Eastern Representative.

THE KINSEY MFQ. CO., Dayton, Ohio.

AUTOMOBILE BODIES



TWO FACTORIES

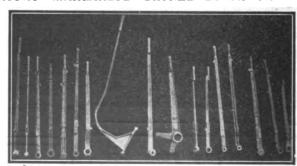
Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Facine, Wis.

PARSONS' MANGANESE BRONZE LEVER CASTINGS



5010 Makers
THE WILLIAM CRAMP & SONS SHIP & ENCINE
BUILDING COMPANY, - Philadelphia, Penna.



\$375 and Upwards

The automobile for winter use. Air cooled no pipes to burst. Solid rubber tires—no punctures. tures. Strong, powerful, durable, relia-Double cylinder—9-10 H. P. Economible. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Bex No. 250 AUBURN, IND.



How Are Your Battorios?

A CONNECTICUT VOLT AMMETER

will tell you. Guaranteed, and the price is right, send for catalogue and trade discounts.

Telt Ammeter, SS.09, Ammeter pair, S4.06

COMMECTICUT TELEPHONE and ELECTRIC CO., Ine MERIDEN. CONN



STA-RITE PLUCS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE; and see for yourself. Double or single Porcelain,—Mica or Magneto,—all kinds. All Good Dealers.

THE R. E. HARDY CO.,
85 Watts St., New York City



Address

Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City. Western Inquiries harford Motor Car Co. of Cleveland 1372 East 12th St., Cleveland.



THE DE

IS RIGHT

outwear an auto, and it will Send for Booklet

Index Speed Indicator Co. MINNEAPOLIS, MINN.



SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies SPRINGFIELD METAL BODY CO.,

366 Birnie Ave., Springfield, Mass.



High-Grade Axles



Pressed Steel Frames

Steering Columns

Transmissions

Steel Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street,

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON "No Sand Too Deep—No Hill Too Steep."

Sand Too Deep—No Hill 100 Ste 2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO.,

Jackson, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.

Show

a Mitchell. Phone "that" to any Mitchell Agent and he'll take you out if you're intercepted in the best value for money outlay you ever saw in the automobile line. Mitchell land is.

MITCHELL MOTOR CAR CO., Racine, Wis.

STANDARD ROLLER BEARING COMPANY PHILADELPHIA

Manufacturers of Steel, Brass and Bronze Balls, Ball Bearings, Roller Bearings and Automobile Axles. Write for new automobile catalogue with full par-ticulars of

THE STANDARD TRANSMISSION AXLE.

RANKLIN MOTOR CARS LIGHT-WEIGHT, HIGH-POWER

\$250 "SUCCESS" AUTOMOBILE

The Original Auto-Buggy,
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature. tive literature

Success Auto Buggy Mfg. Co., Inc. 531 De Balivere Ave., St. Louis, Me

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY

NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of_

Name

Address

Ask us about ontinental

Ready-Flated Tires: they reduce tire expenses.

CONTINENTAL CAOUTCHOUC COMPANY J. M. GILBERT, General Manager,
43 Warren Street, New York City.
Representation everywhere.

"Keep your eye on Continentals"

AMERICA

MICHELIN TIRE CO.,

Militown, N. J.

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.

TRUFFAULT-HARTFORD

Trade SHOCK ABSORBER
Mark

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO., artford, Pres. 66 Vestry St., New York

Logan 1908 Model T One Ton Truck

A truck equipped with a four cylinder air cooled 20 H. P. motor, built for service and fitted to carry its load day in and day out under all conditions. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE, OHIO.

REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

EISEMANN HIGH-TENSION MAGNET 08 LAVALETTE & CO.

112 West 424 Street.

NEW YORK

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y. Water St.,



THE CONTINENTAL AUTO MFG. CO.



"The Pullman of Motor Cars" 1908 Models Ready for Delivery RAINIER MOTOR CAR CO., Broadway and 50th St., New York



E V. Hartford, Pres.

Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.



WYEAR LONGEST

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St.
CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.
FOBES AUTO SUPPLY CO., Portland, Oregon.
FOBES AUTO SUPPLY CO., Seattle, Washington.
FOBES AUTO SUPPLY CO., Providence, R. I.

CIMIOTTI GARAGE

Now York City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try us.

Tel. 2686 River.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

Simple, effective, correctly designed Mahogany finish wood frame, trimmed in brass, 3-16 crystal plates, steel stay rods, bottom of frame shaped to dash of any standard automobile. Can be attached easily and quickly.

We make the London Tops. Write for details and prices.

LONDON AUTO SUPPLY CO. 1233 Michigan Avenue

AJAX YRAPPED TIRES **CUARANTEED FOR** 5,000 MILES RIDING

Write for copy of Guarantee-Dept. A. AJAX-GRIEB RUBBER CO., General Office, 57th Street and Broadway, New York. AGENTS IN ALL LARGE CITIES.

Wico Adiustable Spark Plug



Each

Guaranteed

WITHERREE ICNITER CO.,

541 West 434 St., New York



The Baldwin Chain Company - MAKE -

Sprockets, Spur and Boyel Gears.

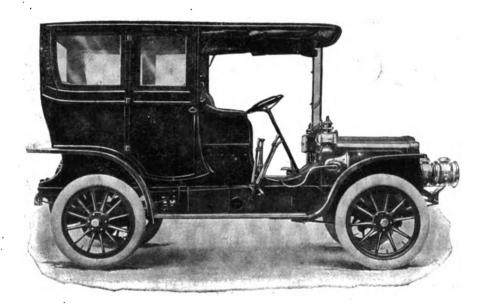
Baldwin Chain & Mfg. Co., Worcestor, Mass., U.S.A.





THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Exclusive Features of the White Limousine

The exclusive White quality of absolute noiselessness of operation is of particular advantage in a limousine because, in a car with a closed body, any noise made by the mechanism is even more noticeable and annoying than in an open vehicle.

Another exclusive White quality—namely—genuine flexibility of control, permits of the machine being guided safely and speedily through the crowded city streets. The speed of the White may be accommodated to the exengencies of street traffic without any changing of gears, jerky starts or the embarrassing and sometimes dangerous "stalling" of the engine.

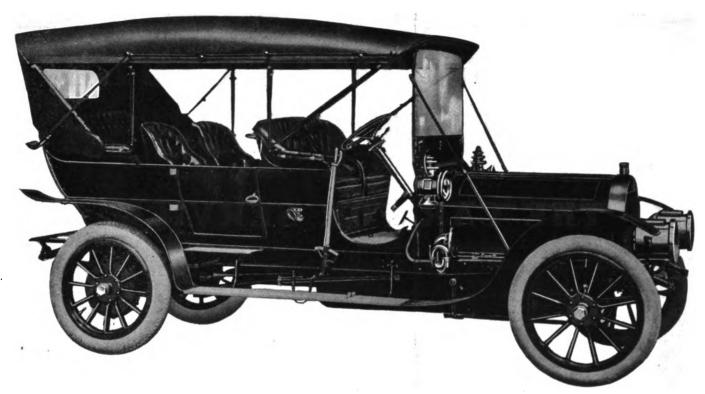
As regards graceful lines and luxuriousness of equipment and finish, the White limousine must be seen to be appreciated.

Write for catalog and the address of the nearest branch or agency

THE WHITE COMPANY

NEW YORK CITY, Broadway at 62d St. SAN FRANCISCO, 1460 Market St. PHILADELPHIA, 629-33 North Broad St.

BOSTON, 320 Newbury St. CHICAGO, 240 Michigan Ave. CLEVELAND, 407 Rockwell Ave.



The Last Word in GREAT ARROW Car Construction is LUXURY

The four-cylinder Great Arrow was and still is a good car as far as efficiency in service is concerned. The six-cylinder adds a touch of luxury, due to ABSENCE OF VIBRATION, which sums up in one word the chief argument in favor of the six-cylinder Great Arrow.

THERE ARE MANY MINOR ADVANTAGES, such as lighter weight of certain parts, ease in starting, possibility of running in traffic on a high gear and other things that will appear to the experienced motorist, but after all, THE ONE GREAT ARGUMENT IN FAVOR OF SIX CYLINDERS IS COMFORT.

A motor car is a pleasure vehicle, and the more comfortable we can make it, the more nearly it becomes the ideal pleasure vehicle, and comfort, luxury, the sensation of gliding rather than being propelled by machinery, are the results attained in the six-cylinder GREAT ARROW.

HERE ARE THE

4-cylinder Great Arrow, 30 H. P., Price, \$4,000 4-cylinder Great Arrow, 40 H. P., Price, \$5,000 6-cylinder Great Arrow, 40 H. P., Price, \$5,500 1908 TOURING CARS 6-cylinder Great Arrow, w m. F., Frice, \$4,500

THE GEORGE N. PIERCE COMPANY.

(Members Association of Licensed)
Automobile Manufacturers

BUFFALO, N. Y.

PIERCE DEALERS

Boston, Mass.
New York, N. Y.
Chicago, Ill.
Pittsburg, Pa.
I Paulman & Co.
Poss-Hughes Motor Car Co.
San Francisco, Cal.
San F Paris, France, N. S. Goodsill (parts only), 22 Avenue de la Grand Armee.

Milwaukee, Wia.
Minneapolia, Minn.
Montreal, Can.
Newark, N. J.
Ottawa, Canada.
Pittsfield, Mass.
Portland, Me.
I'rovidence, R. I.
Kochester, N. Y.
Salt Lake City, Utah.
Scranton, Pa.
Springfield, Mass.
St. Louis, Mo.
Tituaville, Pa.
Toronto, Ont.
Troy, N. Y.
Binghamton, N. Y.
Binghamton, N. Y.
Mobile, Ala.
Omaha, Neb.
Richmond, Va.
snly), 22 Avenue de la (en)

Hibbard Auto. Co.
Pence Automobile Co.
Wilson Automobile Co.
Ellis Motor Car Co.
Wilson & Co.
Central Auto. Station Co.
F. A. Nickerson Co.
F. Co.
Tross-Hughes Motor Car Co.
U. S. Auto. Co.
Trom Botterill
Standard Motor Car Co.
E. R. Clark Auto. Co.
Western Auto. Co.
U. Lambert & von Tacky
Auto. & Supply Co., Ltd.
Troy Auto. Exchange
Utica Motor Car Co.
Binghamton Motor Co.
So. Automobile Co.
H. E. Prederickson
B. A. Blenner
nd Armee.

187 Wisconsin Street
717 Hennepin Avenue
117 Craig Street, West
222 Halsey Street
142 Bank Street
55 West Street
642 Congress Street
512 Industrial Trust Bldg
21 Plurouth Avenue 21 Plymouth Avenue 62 W. Third. South

461 Worthington Street 4701 Washington Blvd. 16 N. Franklin Street 24 Temperance Street 22 Fourth Street

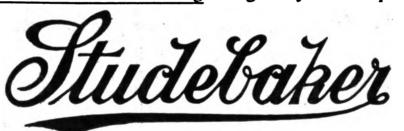
172 State Street 105 S. Conception Street 2046-2048 Franklin Street 1607 West Broad Street

A dependable car A responsible maker

Over half a century's reputation for honorable and orthodox business methods should appeal to every prospective purchaser of a car, and to every live dealer with an eye to the future. The STUDEBAKER policy may be summarized in four words

"Good, or Made Good"

It's worth much to know that the firm that makes your car is both able and willing to give you a square deal.



Automobile Co.

Main Factory, South Bend, Indiana

General Office, Cleveland, Ohio

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE



SIMPLE AND ABSOLUTELY AIR TIGHT

¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

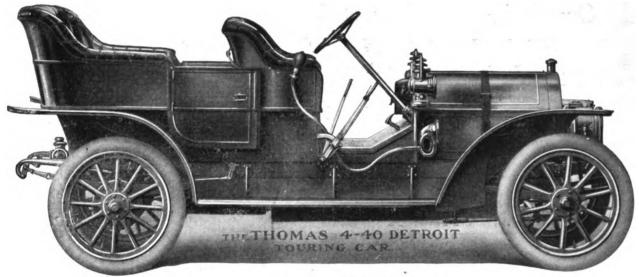
Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturere

Manufactured by A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York

THOMAS 1908

A complete line of Motor Cars of the highest quality possible in Design, Material and Workmanship. They will do what you wish your car could do



PRICE, \$2,750

Thomas 4-20 Towncar

The original Towncar, designed for City and Suburban use exclusively. Beautiful bodies, quiet operation; low cost of maintenance. The Society Car.

Thomas 4-40 Detroit

Best of all shaft-drive cars. In power, speed, hill-climbing, and reliability the Thomas Detroit leads the five passenger class.

Thomas 4-60 Flyer.

Winner of hundreds of contests of speed, hill-climbing, reliability, and endurance. Has more records than any American car. This year improved, enlarged, and refined.

Thomas 6-70 Special

The six-cylinder model of the Thomas Flyer, built by America's pioneer six-cylinder builders. The greatest car in America in speed, size, reliability and refinement.

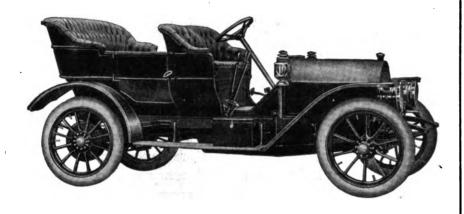
Thomas Cars Succeed

E. R. THOMAS MOTOR COMPANY

Member A. L. A. M.

Buffalo.

PREMIER



THE DEPENDABLE CAR

Not the car with one or two strong features and and many weaknesses—

But the dependable car
That DOES THINGS,
and does them WELL.

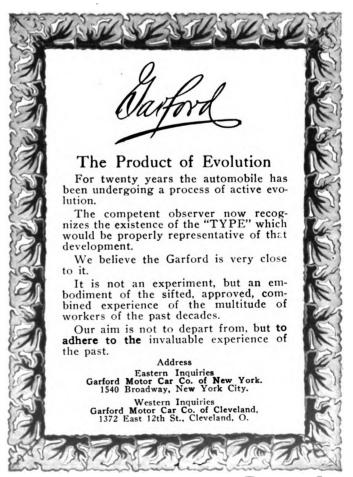
Send for Catalog S

PREMIER MOTOR MFG. COMPANY

Indianapolis, Ind., U. S. A.

Members A. M. C. M. A.

THE BEST WAY
TO FIND A GOOD
THING IS TO LOOK
FOR IT X WE HAVE
A FIND IN THE
AURORA MOTOR WORKS
AURORA - ILL.





From a **Simplicity Standpoint**



The "Solar" has fewer parts than any other lamp. That means simplicity of construction—a point vitally necessary in the building of an automobile lamp. Parts are drawn from heavy sheet brass and when assembled are riveted—not soldered. The internal method of screw assembling used by us leaves a smooth exterior permitting ease of cleaning.

Badger Brass Manufacturing Company

TWO FACTORIES

Kenosba, Wis.

436 Eleventh Avenne, New York

The Largest Automobile Supply House in America

Your Profit, Mr. Dealer

depends upon your sales. You must sell goods that are in demand and move rapidly, and give you a good profit. We would like to have you investigate

The Celebrated **Brampton Chain**

They are rapid sellers and bring many duplicate orders. Every customer a satisfied customer and a daily advertiser for you and the Brampton Chain. It is the strongest chain on the market. Made of self-hardening steel.

We have in stock all sizes to fit American and foreign cars.

THE PRICE is the same as you pay for any other chain, in fact all automobile chains now on the market are same

price to manufacturers, jobbers, dealers and users, and our

prices are the same as quoted by chain manufacturers.
PRICE THE SAME, QUALITY? INVESTIGATE.
Get the best at the same price. Agents wanted in unoccupied

territory.
1907 Catalog mailed upon request; the largest of its kind ever published.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 1829 Euclid Ave.

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 2271-229 Jefferson Av. Buffalo, N. Y., 824 Main St.



THE LEADER



MODEL D-24 H.P., 4-CYLINDER, \$1,750.

N ADVANCE OF ALL OTHERS-first in giving allthe-year-'round uninterrupted service, first in low cost of upkeep, first in being a profitable investment rather than a mere comfort, and yielding the highest returnsthat is

It no longer is necessary for me to count up the many exclusive Maxwell advantages-those who are using Maxwell cars, and there are now 9,728 of them, are our best salesmen. Ask one of them.

Whether your requirements call for a small car, or for a car of medium power and medium weight, or for an automobile of forty horse-power, your particular kind of vehicle is included in our line.

Whether you have set aside for your automobile purchase \$825, \$1,450, \$1,750, or \$3,000, we make just that car, for we are

Automobile Manufacturers to the American People

J. D. Maxwell is the foremost of American automobile designers. His name and the name of his car has become a household word with every American motorist.

Let me send to you the new Maxwell catalog, which is one of the few catalogs that really tell things. Let me give you the name of the Maxwell representative in your locality. He will be glad to give you a demonstration or refer you to Maxwell owners.

Denj Priocag Prosidori.

Maxwell-Briscoe Motor Company Members A. M. C. M. A.

P. O. Box 106

Tarrytown, New York

FACTORIES:

Tarrytown, N. Y. Chicago, Ill

Pawtucket, R. I. Newcastle, Ind.

BRANCHES:

BRANCHES:

New York: Maxwell-Briscoe, Inc., 317 West 59th St.
Chicago: Maxwell-Briscoe Chase Co., 1407 Michigan Ave.
Detroit: Maxwell-Briscoe McLeod Co., 243 Jefferson Ave.
Pittsburg, Pa.: Maxwell-Briscoe Pittsburg Co., 620 Maryland Ave.
Buffalo: Maxwell-Briscoe Buffalo Co., 26 Goodrich St.
Boston: Maxwell-Briscoe Boston Co., 121 Massachusetts Ave.
Los Angeles, Cal.: Maxwell-Briscoe Willcox Co., 1321 S. Main St.
Dallas, Tex.: Maxwell-Briscoe Hanley Co., 305 Commerce St.
San Francisco, Cal.: Maxwell-Briscoe Pacific Co., 440 Golden Gate Ave.
Kansas City, Mo.: Maxwell-Briscoe Automobile Co., 1616 Grand Ave.

You *Can* Afford the **Vitche**

-Afford to buy it because it is moderate in price.

We know you can afford to keep it, because we have many letters from users of Mitchell, testifying from actual daily experience, that it is the most economical car to operate. Before you buy a car, send for these letters and try a Mitchell in a 50 or 100-mile road test.

In demonstration, you'll notice not only that its style, finish and construction is equal to that of the extravagantly high priced cars, but that its performance is too.

Proof is easy, Mr. Business Man. The Mitchell Agent will be glad to take you out at any time you say. Just call him up-no obligation on your part.

Try the \$2000 Touring Car—the \$2800 Limousine—the \$1250 Roadster or the \$1000 Runabout.

Get demonstrations of high priced cars and compare the Mitchell with them.

Call up the Mitchell Agent today and just say



The Mitchell Touring Car shown below is 35 H. P.—4-cylinder speed, 50 miles—finish, Mitchell blue -price, \$2000.

Write for Catalogue No. 18, describing the other Mitchell models. Mitchell Motor Car Co., 279

Mitchell Street, Racine, Wis. Member American Motor Car Mirs. Ass'n.



The Car of Steady Service

as applied to the



is more than a mere phrase, it is a title earned through correct design and careful construction and proven by years of hard, constant service wherever power-driven vehicles are known.

The practical qualities that established the Rambler reputation are,

- 1st—APPLIED POWER. By this we mean actual tractive force as applied to the road wheels. Owing to the straight line drive of the four-cylinder models and the direct chain drive in the two-cylinder cars, Ramblers have greater propelling force per pound than any other car on the market.
- 2d—DEPENDABILITY. Ramblers are built to stand the test of hard, daily service over the worst of American roads. This condition is not reached by mere weight and masses of metal, but by simple, scientific construction in which each element is stronger than the strains upon it can ever require.
- -PRACTICAL ROAD VALUE. With the vast facilities of an enormous plant like the Rambler factory, skillfully directed to the production of two models only, greater value per dollar can be offered than is possible in a plant of lesser output.

In short, the Rambler is a car of

Power, Service and Value

Ordinary business policy dictates a careful examination of its many high qualities before ordering your new car

Our 1908 catalog fully describing two touring cars and a high-powered roadster is at your service: write to-day.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wis.

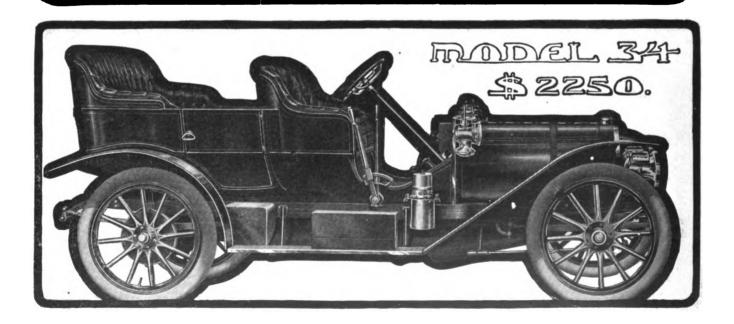
CHICAGO

BOSTON

Branches and Distributing Agencies MILWAUKEE

PHILADELPHIA

SAN FRANCISCO



Volume XVII.

New York, U. S. A., Thursday, February 13, 1908.

No. 20

SEARCHMONT CAN'T SHARE SURPLUS

Supreme Court Upholds Cancellation of Its Selden License—End of an Unusual and Persistent Suit.

The trustees of the bankrupt Searchmont Automobile Co., of Philadelphia, have lost the third and final round of their fight for a share of the Association of Licensed Automobile Manufacturers' surplus and to force the restoration and permit the sale of the Searchmont's cancelled license.

The decision of the Searchmont appeal to the New York Supreme Court was handed down this week by the Appellate division. It affirms the ruling of Judge O'Gorman in the lower court, the decision of the five judges comprising the division substantially being: "No cause of action established; complaint dismissed with costs."

In Justice O'Gorman's decree he cited clearly his opinion as to the rights and liabilities of members of an unincorporated association and the association itself. In part he said:

"The rights and liabilities, however, are always controlled by the articles of association, which constitute a contract, the terms and provisions of which are binding on all its members, and the courts cannot redress any act of an association in the expulsion or punishment of a member or the forfeiture of his membership when such action has been taken in accordance with the express conditions of association ar ticles."

The Searchmont Automobile Co., then a member of the A. L. A. M., went into bankruptcy in 1904, and as it had failed to pay royalty due on its product, its license was promptly cancelled. Some time afterward, the trustees brought suit in the Pennsylvana courts against the association, but the case was dismissed for lack of jurisdiction. It was then renewed in New York in the Supreme Court, and was decided adversely to the Searchmont interests. They then

carried it to the appellate division, which, as stated, just has sustained the lower tribunal.

It is the only instance in which the Selden license, as such, and the "working agreement" of the licensing association have been put to the legal test and as such the decision is of no small interest. Interest in the case was further heightened by the general understanding that while the Searchmont trustees were but nominal complainants, the man behind the scenes was really the attorney for the Ford Motor Co., who sought to lay bare the books and accounts and other figures of the members of the A. L. A. M.

Receivers Begin Suit Against Grout.

Following the recent examination of Karl Grout, at which some evidence was taken bearing on a charge of conversion of assets, the receivers of the Grout Bros. Automobile Co., Orange, Mass., have instituted suit against Charles B. Grout, formerly senior member of the concern. The action is to recover \$10,000 for the alleged conversion of two automobiles, \$2,500 in cash and sundry machine parts. Meanwhile it is stated that Rossell Drisko, former manager of the Bay State Automobile Co., Boston, has been engaged to take charge and operate the Grout plant.

To Build Cars in California.

The Stanford Automobile and Mfg. Co., has been formed in Palo Alto, Cal., to manufacture a two-cylinder touring car. It is capitalized at \$75,000, and work his been commenced with ten men in the Stanford Automobile Co.'s garage at 511 Alma street. H. W. Hooper, J. E. Sloan, Frank Sloan and F. S. Hitchins are the men interested in the venture, Hooper and Hutchins being the owners of the patent which will be operated.

Fields Advanced to Vice-Presidency.

Harry E. Fields, sales manager of the Hartford Rubber Works Co., has been elected vice-president of the company. He will make New York City his headquarters.

BRISCOE AGAIN HEADS A. M. C. M. A.

All Other Officials Also Are Re-elected at Annual Meeting—Show Situation is Discussed at Length.

At the annual meeting of the American Motor Car Manufacturers' Association, which occurred in Detroit on Friday and Saturday last, 7th and 8th inst., the incumbent members of the committee of management all were elected their own successors, as follows:

Benjamin Briscoe, chairman; R. E. Olds, vice-chairman; H. O. Smith, treasurer; Wm. Mitchell Lewis, secretary, and W. H. Van Dervoort, auditor.

Three new members of the committee of management were elected for three year terms. They were C. G. Stoddard, Dayton Motor Car Co.; Barney Everitt, Wayne Automobile Co., and Wm. Mitchell Lewis, Mitchell Motor Car Co. The other members of the committee are: Charles Lewis, Jackson Automobile Co.; W. C. Marmon, Nordyke & Marmon Co., and Alfred Reeves, General Manager.

The annual reports proved that the past year had been an auspicious one. The treasury was never so full. As evidence, \$5,000 was voted for the work of the Good Roads committee and a rebate of 25 per cent. will be paid to all members who exhibited at the October show in Grand Central Palace, New York.

The reports indicated that there had been a slight falling off in the sale of cars in the big cities during the last three months of 1907, but that as an offset there had been an increase in the sale of cars in cities of less than 50,000 inhabitants.

The subject of future shows afforded prolonged discussion. The whole matter finally was referred "with certain recommendations" to the show committee. The nature of the recommendations was not disclosed, but it is known that the association favors continued co-operation with the Automobile

Club of America, but on a somewhat altered basis. If the club should not care to again undertake the promotion or management of the "independent" show in New York, the A. M. C. M. A. itself will assume the task. The subject, however, has not been discussed by the club, nor have the manufacturers named their new show committee which will enter into conference with the clubmen at the proper time. At the Detroit meeting, there was considerable difference as to whether December or January is the best show month. No one, however, is anxious for another October exhibit.

The A. M. C. M. A. voted to co-operate also with the A. A. A. in the matter of tours and races, a special committee for the purpose being appointed for the purpose, viz.: H. O. Smith, chairman, Premier Motor Manufacturing Co.; A. C. Newby, National Motor Vehicle Co.; W. C. Marmon, Nordyke & Marmon Co.

Storage Battery to Cut Capital.

At the annual meeting of the Electric Storage Battery Co., of Philadelphia, owners one-third of the capital stock of the Electric Vehicle Co., which will be held March 18, it seems certain that the stockholders will then vote to reduce the par value of the company's stock from \$100 to \$50 per share. President Lloyd says that this measure has been suggested by several of the largest stockholders, among whom are Thomas Dolan, Rudolph Ellis, Herbert Lloyd George D. Widener, P. A. B. Widener, Authony N. Brady, Harry Payne Whitney, H. H. Vreeland, and Grant B. Schley.

According to the last annual report, the company's outstanding stock consists of \$17,785,800 common and \$214,200 preferred. But since the issuance of the report all of the preferred stock, with the exception of a few hundred unassenting shares, has been called in. The preferred is entitled to dividends of 1 per cent. per annum, cumulative. but both classes of stock have received 5 per cent. yearly since January, 1901.

The stockholders who suggest the reduction in the amount of stock outstanding consider that it is too large for the company's assets. In the last report these were stated at \$22,225,209. The largest item was "Patents, agreements and franchises, \$13,661,626."

The common stock of the Electric Storage Battery Co. is considered active in Philadelphia, where it is traded in. There it has declined from 75 to 28½.

Mabley Leaves the Salon.

C. R. Mabley has resigned the management of the Importers Automobile Salon. He has been succeeded by his former chief assist. W. R. Lee. The Importers offices will be maintained in the Bryant Park Building, New York, but hereafter they will be shared by the New York Automobile Trade Association—the local retailers' organization—an arrangement to that end having been consummated.

The Week's Incorporations.

Somerville, Mass.—Davis Square Auto Co., under Massachusetts laws, capital not stated. Manager, Winsor L. Snow.

Philadelphia, Pa.—American Automobile Equipment Co., under Delaware laws, with \$100,000 capital. Corporators not stated.

Racine, Wis.—Miller Motor Co., under Wisconsin laws, with \$25,000 capital; to deal in automobiles. Corporators not stated

East Orange, N. J.—Motor Car Supply Co., of New Jersey, under New Jersey laws, with \$25,000 capital. Corporators—Charles D. Geyer, Frank C. Ferguson and Frank E. Ruggles.

Columbus, Ohio—Field-Snyder Automobile Co., The, under Ohio laws, with \$10,000 capital. Corporators—John Field, George Snyder, G. E. Snyder, and S. J. Field, all of Columbus.

Evansville, Ind.—Lannert Mfg. Co., un der Indiana laws, with \$25,000 capital; to deal in carriages and automobiles. Corporators—Henry N. Lannert, Margaret Lannert and Louisa N. Lannert.

Morris, Ill.—Morris Automobile Garage Co., under Illinois laws, with \$2,000 capital, to do general garage business. Corporators —Landy Hoge, J. B. Moss, Joseph Pattison, O. T. Wilson and M. B. Wilson.

New York City, N. Y.—Ennis Rubber Mfg. Co., under New York laws, with \$50,000 capital; to manufacture rubber tires, etc. Corporators—F. J. Ennis, Brooklyn; J. M. Beasy, C. N. Foster, New York City.

New York City, N. Y.—Wayne Motor Car Co., under New York laws, with \$10,000 capital; to deal in automobiles. Corporators—Frank A. Sanford, Roselle, N. J.; Andrew C. Knoller, 141 Broadway; Julian B. Beatty, 529 West 111th street, New York City.

New York City, N. Y.—Universal Auto & Motor Boat Supply Co., under New York laws, with \$10,000 capital. Corporators—Brutus von Schwanenfluegal, 134 East Seventy-second street; William H. Orth, 181 Prince street; John J. Kennedy, 38 East Twenty-second street, New York City.

In the Retail World.

Roy Quimby and D. D. Cummings have "opened" in Mankato, Minn. The Ford will be carried.

W. M. Ball and C. A. Stotler have opened a garage in Devil's Lake, N. D. The Cadillac, Franklin and Buick will be handled.

C. H. Bond has purchased the big Copley Square Garage, at 25-31 Irvington street, Boston, H. M. Gulesian being the grantor. The sale price is not stated, but the property is valued at \$350,000.

Charles T. Jeffery, eldest son of the Kenosha manufacturer, has, in addition to his duties at the factory, assumed the presidency of the Rambler Garage Co., located at Sheridan road and Wilton avenue, Chi-

cago. His brother, Harold W. Jeffery, is vice-president, and L. A. Richman secretary and treasurer.

Charles E. Miller's Cleveland branch has been removed from 406 Erie street to 1829 Euclid avenue. The new location brings the branch into the center of the city's automobile district.

Omaha (Neb.) dealers have organized the Automobile Show Association, to promote a show during the week beginning March 15th. J. J. Deright was elected president, and C. G. Powell, secretary-treasurer.

The two-story brick building at 235 West Sixty-ninth street, New York City, occupied by Harry Lauderbach as an automobile school and garage was damaged by fire Monday, 10th inst. Four cars were destroyed, the loss totalling \$13,000.

Its "carnival week" proved so successful last year that the Indianapolis dealers have decided to repeat it during the week of March 16th to 21st next. As was the case last year the carnival will start with a decorated parade, and each salesroom along the row will be decorated for the occasion. As an added attraction a hill-climbing contest is on the tapis.

New Jersey Lops Off Dead Limbs.

The list of "dead ones," as those corporations in New Jersey who have not paid the taxes assessed them for two years are termed, was published this week. Many hundred corporations are, according to the State act, without legal right to do business, and their charters have been repealed. Among the long list of names are the following: American Rotary Engine Co., American Trimoter Co., Burlington Mobile & Transportation Co., Holyoke Automobile Co., Insular Auto Co., Kensington Automobile Co., National Automobile Co., Newark Motor Vehicle Co., Newark Pneumatic Puncture Proof Tire Co., Orange Automobile Co., Plainfield Auto Garage, Royal Automobile Co., Thermobile Co. of America. Thornycroft Motor Wagon Co. of America, Tuck Petroleum Motor Co., and the Upton Motor Co.

George N. Pierce Drops Business Cares.

George N. Pierce formally has retired from the Buffalo company which so long has borne his name. Practically, Mr. Pierce had not been active in the affairs of the George N. Pierce Co. for a year or so and has been planning gradually to relinquish business cares and to placidly enjoy the remainder of his days. He has made the first move in that direction by going South where he will spend the winter. His resignation as president brought about the election of the following officers, all of whom have been connected with the Pierce interests for many years: President, G. K. Birge; vice-president, Henry May; treasurer. Charles Clifton; secretary, L. H. Gardner. With W. H. Hoyt they constitute the board of directors.



WOMEN MIX THE SHOW SITUATION

They "Butt in" at San Francisco—Their Projected Exhibition Creates Discord Among the Dealers.

San Francisco is to have an automobile show after all, despite the vote of the Automobile Dealers' Association of California against such a project. It will be held in the Coliseum, March 2 to 8 inclusive, under the auspices of the California Woman's Automobile Club, and this fact has brought about a split in the trade association.

Ever since they, by a small majority vote, decided to abandon their annual show, there has been considerable friction among San Francisco's dealers. The minority, who wanted to hold a show, got after the women motorists and persuaded them to hold a show in March, the entire profits to go to the California Woman's Automobile Club.

The effect of the announcement was instantaneous. The dealers who had voted against a show, believing the present year not propitious for such an exhibition, circulated a petition among the dealers, to make them agree not to exhibit at the show promoted by the fair sex. Those who signed the agreement are said to be: C. S. Howard, Howard Automobile Co.; J. W. Leavitt, J. W. Leavitt & Co.; A. H. Hunter, Osen-Hunter Automobile Co.; Cuyler Lee, the Packard agent; J. H. Eagai, Studebaker Bros Co.; E. P. Brinegar, Pioneer Automobile Co.; G. A. Boyer, Boyer Automobile Co.; L. H. Bill, Thomas B. Jeffery & Co.; Max L. Rosenfeld, Auto Livery Co.; W. F. Culbertson, Mobile Carriage Co.; W. L. Huggson, Standard Motor Car Co.; Frank O. Renstrom, F. O. Renstrom Co.; Frank G. Miner, for the Locomobile Agency; the San Francisco Pope Auto Agency, and the White Co.

J. W. Leavitt, who circulated the petition, said that those who had signed it believed that the proper body to handle such exhibitions would be the dealers' association, and inasmuch as that body had decided not to hold the show, he could not see any necessity for such an exhibition.

It is safe to say that the California Woman's Automobile Club will not get a sanction from the Automobile Dealers' Association of California, the body which is supposed to grant sanctions for such affairs, and it is freely hinted that those dealers who exhibit in the women's show without sanction will probably be expelled. Despite this hatchet over their heads a number of dealers have decided to show at the Coliseum in March and the feminine club's show committee, composed of President Mrs. Fred J. Linz, Mrs. Abbie E. Krebs, and Mrs. Robert Christic, are going ahead with preparations. The women have announced a partial list of dealers who have promised to exhibit at the show, one of the peculiar features being that the Locomobile Agency, which is said to be against the show, according to Leavitt's petition, is also represented on the women's side. The other exhibitors, as announced, are: Keystone Automobile Co., City Hall Auto Co., Dragon Automobile Co., I. Freeman, Carmichael-Bray Automobile Co.; A. J. Hayes, Frayer-Miller agent; Rambler Automobile Agency, Maxwell-Briscoe Pacific Co., N. R. Cooper, Premier; Renault Freres Co., Pacific Motor Car Co., Winton Motor Carriage Co., and the Corbin Agency.

The Automobile Dealers' Association of California will hold a meeting shortly at which it is expected there will be unusual activity and "doings."

Pope Dividend is in Prospect.

Receivers Pope and Yule of the Pope Mfg. Co., Hartford, have closed a deal with a Chicago broker for the sale of the former Imperial bicycle plant in Chicago, for \$100,000, a substantial part of which already has been paid. Options also have been given on other idle plants belonging to the Pope Mfg. Co., all of which its is expected will be taken up in the near future.

The affairs of the company are in a most prosperous condition. The Hartford plant is working full time and has had an average pay roll of more than \$12,000 per week for the past four months; orders for Pope-Hartford cars are all that can be desired and prompt shipments are being made. Both of the Pope bicycle factories also are in full blast and are fuller of orders than at this time last year, the bicycle business, remarkable to say, having scarcely felt the effects of the financial depression.

The receivers have taken advantage of cash receivers have taken advantage of cash discounts on all merchandise contracted for, and last week every account due was paid. They are hoping that by April 1st a substantial dividend will be declared.

Almost an "International Case."

In the common pleas court at Hartford, Conn., on Tuesday last, 11th inst., there was heard the case of Thomas W. Fahy, of Hartford, against A. Clement, the Paris automobile manufacturer, for \$872, balance due and interest. Fahy testified that about July 20, 1902, he entered the employ of Clement, who at that time was manufacturing small motors for bicycles and automobiles at a factory in Hartford, at a salary of \$5 a day. He was engaged by William G. Allen, Clement's general manager and representative in Hartford. Fahy remained as superintendent of the factory till February 20, 1904, at which time the plant was closed and discontinued, a period of 436 working days. His salary amounted to \$2,180 and the defendant has paid \$1,308, leaving \$872 due. During the management of Allen, Fahy had frequently asked that the balance of \$2 a day be paid him and he had also asked M. Roquet, Mr. Clement's nephew, who succeeded Mr. Allen.

\$100,000,000 MARK IS PASSED

Census of the Automobile Industry Shows
Volume of Business for 1907—Story
Told in Big Figures.

While many presentments of more or less elasticity have been printed, designed to show the volume and importance of the automobile industry, what undoubtedly is the most careful compilation of figures and what fairly may be accepted as a census of the automobile industry just has been completed by the Association of Licensed Automobile Manufacturers. Their records are such that they know to the last car what is the output of their members, and by intelligent and diligent inquiry they have been able to arrive at a fair estimate of the extent of business transacted by the others in the trade.

As a result of this research the statement is made that the value of the product sold during the year of 1907 was \$105,669,572, the capital employed was \$171,448,769, and the number of employes engaged 108,500. The number of pleasure gasolene cars manufactured in this country is placed at 47,302, of an aggregate value of \$96,169,572. There also were produced 5,000 steam and electric pleasure vehicles, of a total value of \$7,500,000, thus giving a total of 52,302 pleasure automobiles sold in the past twelve months with a total value of \$105,669,572.

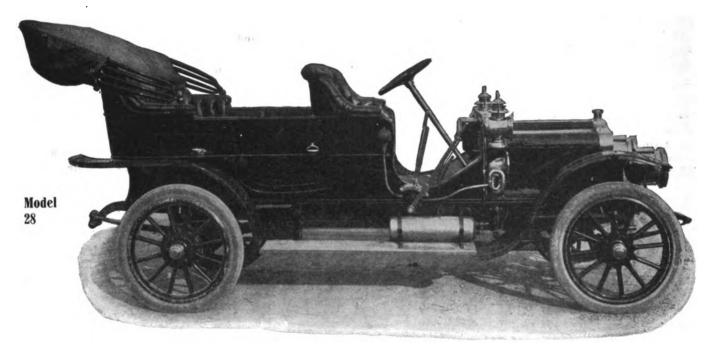
The percentage of increase each year has been consistent, as shown from statistics gathered in 1904, which show the value of the total output \$26,645,064 as against \$105,-669.572 for the year 1907. Based upon accurate knowledge of the number of employes and the production of a large number of automobile factories, it is estimated that the total number of employes directly employed in the factories is 58,000, and the capital employed \$94,200,000. As in many other manufacturing products, there is an indirect investment which is closely allied to vehicle manufacture. This includes such products as tires, rims, lamps, speedometers, drop forgings, etc. Close estimation shows that there are 29,000 employed in this indirect manufacture with total capital employed of \$36,700,000. Unlike many other manufactured products the sales end of the automobile industry is exceedingly, expensive. At the close of the year 1907 there were 2,151 sales and garage establishments employing 21,500 people, with a capital of \$57,500,000 invested to do this business. This includes real estate, rentals, insurance bonds and interest on money invested.

By adding the Selden \$2,000 light touring car to their account, the Palmer & Singer Mfg. Co., New York, have completed the readjustment of their lines. They thus will offer the choice of Seldens, P & S's, and the imported I. F.









Five Passenger Touring Car \$2000 Three Passenger Runabout \$2000

An Attractive Car at an Attractive Price

SPECIFICATIONS

Engine—4 cylinders, 41/4 x 41/2, 28-30 brake horse-power.

Transmission—3 speeds forward and reverse, selective, Timken bearings.

Wheel base—109 inches; tread, standard; clutch, cone leather.

Body—sheet metal, straight line type, roomy and comfortable.

Tires—32x3½, quick detachable; make optional. Frame—pressed steel, 4¾ inches deep.

Front axle—single I-beam drop forging, ball bearings.

Rear axle—bevel gear drive, enclosed type, roller bearings.

Ignition—synchronized jump spark.

Weight-empty, 2,200 lbs. (actual, not catalog).

Represented in Greater New York by

THE PALMER & SINGER MANUFACTURING COMPANY, 1620 BROADWAY

SELDEN MOTOR VEHICLE COMPANY ROCHESTER, N. Y.

Members A. L. A. M.

AGENCIES WANTED IN UNOCCUPIED TERRITORY







Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

£# Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Pacilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, FEBRUARY 13, 1908

About "Jersey Justice."

It is fetching matters pretty far when the unfriendly critics of the organization assert that the plainly spoken address of President Hotchkiss of the American Automobile Association at the Newark banquet had anything to do with the "shakedown" introduced by Senator Frelinghuysen a few days later in the New Jersey Senate. In his inaugural speech, Governor Fort had recommended such a course and it was well known that a bill embodying his views was in preparation. Mr. Hotchkiss's words neither quickened nor retarded the action of Senator Frelinghuysen. He already was cocked and primed for another assault on the automobilists' pocket books. They always have proved such "easy picking," that any "robber State" need have small cause for timidity.

Plain speech was sadly needed in New Jersey and it served best just when and where and in the fashion that it was delivered by Mr. Hotchkiss—directly to the elected promoters and advocates of that form of extortion. The mock heroics and mock regrets of New Jerseymen, who, like Frelinghuysen himself, earn in New York the daily livelihoods which they spend in New Jersey, is as amusing as it is inconsistent. The fact that the Hotchkiss ad dress stung Governor Fort to retort is a hopeful sign. The Governor's excuse for the extortion is the first official explanation that ever has been youchsafed.

What if the road between New York and Philadelphia does lie in New Jersey? The road between New York and Buffalo lies in New York, as does the road to Coney Island, and it is a safe assertion that the latter, at least, is used far oftener by New Jerseymen than the road to Philadelphia is used by New Yorkers.

What if New York motorists do make frequent use of the roads to the New Jersey seaside resorts? Do they not pay expensive "toll" to the New Jersey roadhouses, hotels and garages every time they visit one of the resorts? And would not the revenues of the latter shrink sadly if it were not for the patronage of the New Yorkers and Pennsylvanians? If New Jersey maintains good roads to the resorts. is it any more than the State owes to its citizens who wax fat at the expense of "outlanders"? The citizens pay taxes that they may thus wax fat. Why should the State discourage patronage by also levying on the visitor? Why should he be "plucked" coming and going and when standing still? Why should extortion be practised on one class of citizens for the upkeep of the roads? Long before it became so apparent that automobilists were "soft marks," there were holes and loose stones and well worn ruts in New Jersey's macadam roads. Why was there then no outcry and no keen itching for "shaking down" the farmers and other drivers whose horsedrawn vehicles caused the ruts and holes?

In his address, Mr. Hotchkiss described the situation not only graphically but fairly. When he denounced the New Jersey law as "against principle, courtesy and self-interest," he told the truth plainly and in a very few words. It is a hold-up, practiced in legal guise, instead of with a mask and a shotgun. If such extortion as New Jersey practises is legal, two thoughts cannot but arise in the minds of men not versed in the statutes: First, What is the meaning of "public roads," of "freedom of

travel' and of "equal and exact justice?" and, second, Is ours truly a union of States? If it is such a union, how is it possible for one State to exact an admission fee and require passports—for that is what the certificates amount to—from the residents of other States or to make the legitimate means of travel employed by one class the measure by which freedom of movement is to be judged?

Possibilities of the Worm Drive.

It is rather to be wondered at that no more attention is being paid by designers to the possibilities offered by the worm drive for final transmission of power in the shaft driven car. Especially in the case of the commercial vehicle, where slow running speeds demand a high driving ratio, and where smoothness of action and the elimination of as many working parts as possible is so much to be desired, the worm drive is particularly desirable.

It is true that the efficiency of the worm gear is usually considered low as compared with that of the spur and bevel types, but improvements in generating its faces, as well as the possibility of employing it to the best advantage in this connection, make it possible to employ it in such a way as to involve little more loss, if any at all, than occurs with the usual form of transmission. Briefly, with the use of the worm, it is possible to employ a "direct drive" to a more nearly universal extent than otherwise, thereby replacing two pairs of spur and one pair of bevel pinions with a single worm. The same improvements in design mentioned, have also done away to a great extent with the former tendency of the worm drive to "lock" when reversed, thus preventing the worm driven car from coasting freely.

It is one of the characteristics of the worm gear that the greater the speed ratio of its members and the more rapidly the driver is permitted to turn, the greater its efficiency. Furthermore, the worm drive is at all times the silent drive. This is not the case with gears of the spur type, as is testified by the use of rawhide and herringbone gears for the transmission of electric vehicles. The worm gear is subject to wear to perhaps a greater extent than the spur, even in its highest development, because its, action partakes less of rolling and more of sliding motion than is the case with the other form. At the same time, the elimination of rattle and shock from the gear

teeth, and the uniformity of the drive obtainable, are points greatly in its favor.

At the present time there are two or three American commercial cars which are equipped with this form of transmission, and perhaps as many abroad, of which a notable example is the "mixed" omnibus system described in another column, in which the principle is applied in a particularly happy manner, it would appear. At all events, sufficient trial has been given the mechanism in its best form to prove it worthy of close scrutiny by the designer. Its possibilities are very promising, and it would hardly appear wise to overlook it wherever conditions warrant the adaptation of the high-speed motor to the slow-moving car.

Concerning the Front Drive.

Front actuation and front control of the motor vehicle is a proposition which unquestionably has been given too little consideration by motor car designers hitherto. For the pleasure vehicle it is true that results are obtained with the usual rear actuated and front controlled arrangement, which justify its continuance. But for the commercial vehicle, with the imperative necessity which is carries of making every foot-pound of energy developed at the motor produce as nearly as may be one footpound of work at the drivers, it is required that everything must be sacrificed to efficiency of the plant. Rear driving and front control involves a considerable waste of power whenever it becomes necessary to turn the vehicle from a straight course, furthermore there is every reason to believe that it develops a less perfect mastery of the machine than is possible where the drivers are also made the guiding wheels. Therefore the use of the front driving system, or the vehicle mounted on four driving wheels, seems the logical outcome of the motor traction enigma.

In the broad presentation of this subject which is outlined in another column, the real basis of advocacy of the front drive principle hinges about the turning of the machine from a straight course. If it is true that fully 95 per cent, of the average running of any machine is done in a straight line, as suggested, then it would appear at first that the present arrangement is as good as any which might be contrived, since it is well worked out and well proved in practice. Nevertheless it should be borne in mind that the subject of trans-

mission and traction losses on curves is one which remains in its entirety to be investigated experimentally. Up to this time, all provision for turning has been based largely on theory, and the question of resistances has been for the most part adroitly side-stepped.

At all events, it would appear that for exact construction, either the drive should be applied to the front wheels, or to all four wheels if steering is done from both ends of the vehicle, or else that the control of the differential should be mechanical and governed by the steering gear, rather than left to compensate itself on the balance principle. It is safe to assume that in either event, the tendency to skidding would be largely overcome were such systems to come into vogue.

For the commercial vehicle, it is necessary to take into account all such fine points as these, which custom and its hurried development have elided in the pleasure vehicle. For the lighter types, it is unreasonable to suppose that present traditions are to be lightly overthrown unless it be found possible to combine this comparatively new ideal with existing forms at a minimum of trouble and expense. It is too late to expect radical alterations in automobile construction as the term is commonly understood. The budding development of the commercial car era, as it is sometimes fondly called, however, leaves ample time for the production of vehicles upon lines in close conformity to theory, and in this respect, it is not unlikely that this matter of adapting the driving relation to all possible variations in the course, is destined to receive considerable attention.

It is evident that the American public is not the only one which likes to be humbugged. The widespread interest in the socalled New York-Paris "race" is evidence of the fact. Every other man expects that the competing cars will be towed by horses or other automobiles, or be taken apart and transported in pieces in carts or on dog sleds, and yet they are at least half-willing to accept the venture as a race, whereas, if a pedestrian, or an equestrian, or a cyclist undertook a journey of the sort and resorted to such practices, he promptly would be denounced as a fraud and a faker by the very newspapers that are promoting the New York-Paris "automobile races." As adding to the gaiety of nations and providing material for a book of unusual travel, however,

COMING EVENTS

February 10-15. Detroit, Mich.—Tri State Automobile and Sporting Goods Association's annual show in Light Guard armory

February 17-22, Cleveland Ohio—Cleveland Automobile Dealers' Association's show in Central armory.

February 21-29, Newark, N. J.—New Jersey Automobile and Motor Club's and New Jersey Automobile Trade Association's annual show.

February 22, Boston, Mass.—Bay State Automobile Association's 150 miles endurance run to Providence, Worcester and return.

February 24-29, Lincoln, Neb.—Dealers show in the Auditorium.

February 24-29, Portland, Me.—Annual show in the Auditorium.

February 25, Brooklyn, N. Y.—Long Island Automobile Club's 242 miles economy run to Montauk Point and return.

March 2-7, Ormond, Fla.—Annual beach carnival, under ausp ces Automobile Club of America.

March 2-8, San Francisco, Cal.—California Woman's Automobile Club's show in Coliseum.

March 7-14, Boston, Mass—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

March 9.14, Buffalo, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

the enterprise is worth something. As a race, it is mere fudge.

It is understood that the New York Automobile Trade Association has abandoned the idea of a day parade, which had been talked of as one of the big features of the April carnival. The decision is a wise one. Of all "weedy," haphazard, uninteresting, unimpressive turnouts, it is unfortunately too true that a parade of motor cars heads the list. If, on the other hand, it is possible to promote a night parade and force the paraders to maintain a slow pace and to keep their distances, illuminations rendered possible by the car's own electrical apparatus may be made to present a novel and beautiful spectacle, that will be worth going miles to see. One impressive feature of the sort will be far more valuable than a series of minor popgun affairs. If the carnival is to be effective, it were well that the butter be not spread too thin.

NEW JERSEY'S NEW "SHAKE BOWN"

Fees Ascend Long Sliding Scale in Five Dollar Jumps—Fifty Cents "Admission Tickets" for Non-Residents.

Senator Joseph S. Frelinghuysen, whose automobile law has been in operation in New Jersey for a year, laid the plans for a larger "shake down" of automobilists in the Senate of that State's legislature last Monday night, 10th inst. Frelinghuysen, who is a lawyer and insurance counselor in New York City and a legislator in New Jersey, doubtless will see his name in print many times, as the amendments he introduced are designed to make larger dollars and many more of them drop into the State's coffers.

They consist of a sliding taxation of the vehicles based upon horsepower, from \$3. to \$100 per year, and a sliding scale for drivers' licenses, from \$1 to \$25. Senator Frelinghuysen also proposes to abolish manufacturers' licenses; to increase the number of paid inspectors from seven to ten, and the unpaid inspectors to twenty, with not more than two from each county; to change identification marks annually, and have the registrations and licenses expire on June 30th each year; to allow citizens of other States the special privilege of using New Jersey's roads for a limited time upon payment of a nominal fee, and to have all the revenue derived from auto mobilists apply to the various counties for the improvement of State highways.

These amendments to the State automobile law are not the only things that have kept Mr. Frelinghuysen busy. On the same dry he introduced two separate amend ments, that really are worthy of passage by the legislature. One is an amendment to the crimes act, making it a misdemeanor to place glass or any other cutting substance on a public highway, and also making it a misdemeanor for failure to return any fine collected under the automobile law. within thirty days. The other bill introduced by Mr. Frelinghuysen provides for a fine of \$10 for any vehicle upon a county or other road without a light between sunset and sunrise.

The measure provides that the present number of paid inspectors be increased from seven to ten and to twenty unpaid inspectors, not more than two of the unpaid inspectors being from one county.

The registration fees are raised from the present rates of \$3 for cars under 30 horse-power and \$5 for those above 30 horse-power, to the following scale:

h.p	\$3.00
h.p	5.00
h.p	10.00
h.p	15.00
h.p	20,00
h.p	25.0 0
h.p	35.00
h.p	10 0.00
	h.p h.p h.p h.p h.p

The drivers' license fees are raised from \$1 for those driving cars of \$30 horsepower and under, and \$2 for those operating cars of more than 30 horsepower to the following scale:

First class	\$1.00
Second class	2.00
Third class	3.00
Fourth class	4.00
Fifth class	5.00
Sixth 'class	10.00
Seventh class	15.00
Eighth class	25.00

Provision is made for a blanket license for licensing cab companies, operating adjacent to ferries, provision being made that they shall operate only one mile within the borders of the State.

It is proposed to abolish the manufacturers' blanket license.

Motorcycles are to be registered at a yearly fee of \$2, and carry such identification marks as may be prescribed by the commissioner of motor vehicles.

All registration certificates shall hereafter expire on June 30, each year, and when certificates are issued for the fractional part of the year, only the fractional part of the feet shall be charged.

The provision also for non-residents' registration and license, fixes an admission ticket" good for six days or any multiple of that number of days, not exceeding thirty days, at a price of 50 cents per six days. It is provided that all identification marks both for residents and non-residents will hereafter be supplied by the State and be changed annually.

The receipts for all sources are to be so distributed by the commissioner of public roads that those counties that have improved roads by the county act shall receive their pro rata share with those that have been improved by the State road act.

Anti-Chain Rule to be Tested.

The first fruits of the New York Park Department's order, which prevents automobiles equipped with tire chains from using the park roadways, became apparent last Saturday when a driver of a taxicab was arrested for entering the park with a vehicle, the tires of which were furnished with this type of protection against skidding.

Meanwhile the Weed Chain Tire Grip Co., who are the makers of the bulg of these chains, evidently do not intend that their customers are to suffer if it can be helped. They purpose testing the legality of the new ordinance and publicly announce that they "stand ready to defend any automobilist arrested for an alleged violation of the Park Board ordinance, so long as we deem such defense necessary or advisable to demonstrate the invalidity of the ordinance."

Waco, Texas, is "agin" automobiles. At its last meeting the city council passed an ordinance restricting the speed of motor-vehicles to 10 miles an hour in all the residential and business sections of the city.

MAYOR MAY STOP THE GRAFT

-Perhaps

Awakened to Prevalence of Joy Rides in City Vehicles—His Confidence in Official Honesty is Jarred.

It is barely possible that—for a time, at least—the extent of "joy riding" at the tax-payers' expense, and the conversion and misuse and abuse of their property may be curtailed in New York City.

The Motor World's series of articles, "Motor Cars as a Medium for Municipal Graft," aroused Mayor McClellan to a sense of conditions in New York, and as a result he has issued an order that his department officials are not to use the city-owned automobiles for private purposes or regard them as personal conveniences.

Two years ago the Board of Aldermen of New York passed an ordinance to the effect that all city owned automobiles must at all times carry a sign, prominently displayed, showing that the car was a municipal vehicle and indicating to what department it was assigned. Mayor McClellan, however, vetoed the bill, explaining that his officials all were men of honor to whom such a measure was unnecessary, as they did not and would not use city property save for city purposes!

What form of deterrent will be employed is not now known, but it is said that may be a central garage will be established where all city machines will be housed and and their outgoings and incomings recorded. The effect of such a system, however, largely will be dependent on the nature of the man who keeps the records.

It is possible—barely possible—also that the police department will be called upon to detail some of their detectives to watch officials who are suspected of "joy riding." The report of their investigations would make interesting reading, but what would happen to the detective who chanced to report the use of a city car by, say a mayor's closest appointee or by a secretary of a police commissioner is not difficult to surmise.

Oklahoma Fixes Stiff Figures.

Oklahoma is trying its hand at automobile legislation, and already the bill introduced by Representative Cope has passed the Assembly without amendment. measure sets a maximum limit of 15 miles an hour in rural districts, ten miles in residential sections of towns and cities and an impossible five miles an hour in business portions. The use of automobiles will come high in the new State, too. The Cope bill requires that each car be registered annually at a fee of \$10, and in addition the driver must secure license to operate the car, the fee for the latter being \$5. No person under 18 years of age will be allowed to drive a car.

FORT DEFENDS NEW JERSEY LAWS

Advocates "Squeeze 'Em Again" Policy at Automobile Club Banquet—Hotchkiss Provokes Him to a Second Speech.

Diametrically opposite views regarding legislative regulation of motor vehicles on the public highways of New Jersey were presented at the annual dinner of the New Jersey Automobile and Motor Club, Newark, Thursday night last, 6th inst., by Governor J. Franklin Fort and Judge William H. Hotchkiss, president of the American Automobile Association. Although J. B. R. Smith, New Jersey's Commissioner of Motor Vehicles, and Charles Thaddeus Terry. chairman of the legislative committee of the American Automobile Association were among the speakers, Governor Fort and President Hotchkiss were hailed as "the" speakers of the evening. The former spoke twice, rising the second time in defense of the New Jersey statutes which had been "unmercifully" attacked by Judge Hotchkiss.

Governor Fort was introduced as a "just legislator and a friend of the automobilist." He expressed his high regard for motorists generally and the fascination he experienced in the sport they represented. He said he hadn't reached the "state of luxury" necessary to ownership of a car, but that during his recent campaign he covered 2,004 miles in an automobile in twenty days—without breaking the speed laws.

"I am a strong believer in the urgency of establishing a department for motor vehicles for two reasons," continued the governor. "In the first place, if the scheme I hope to put through meets with the approval of the people, a revenue will be derived from this department that will equal any revenue in the State, excepting that from corporations. I don't see any reason why autoists should not contribute at least \$200,000, considering the benefit that would redound to them.

The speaker referred to the roads of New York State and told of the method of taxation by which they were made, and kept in repair. He spoke of the proposed method of taxing automobiles in New Jersey. In this particular he said that it mattered not to him whether motor cars were taxed on a basis of their respective horsepower or weight. In any event an increased license fee, such as has been proposed, would be an extra burden to the autoists, but he thought that it would cause no diminution in the ranks of automobile enthusiasts, but, by reason of better roads obtained, would increase the number, giving the automobile trade and automobilists superior advantages.

As to speeding inconsistent with the public safety, the Governor asserted that the law justly fixed the limitation, and he de-

clared that violators of the speed laws should be summarily dealt with, adding that if it was in his power, he would help put any violator to a full experience of the discomfort of law breaking.

"Another thing," the speaker declared, "I think that every tire on the road should be taxed, and I am hopeful of bringing about—perhaps it won't be this year or next—the placing of such a tax upon every vehicle using the public highways. And then, too, no vehicle, automobile or carriage, should be allowed on the road at night without lights. This would be a hardship on no one and would result in greater protection to the driver than the pedestrian."

In something of an apologetic strain, Judge Hotchkiss prefaced his written speech. He did not disagree with Governor Fort in many things, but in automobile regulation he differed with him on many points. He responded to the toast "Jersey Justice," and in the course of his address denounced with no little asperity the present laws regulating drivers of motor vehicles, and especially the treatment accorded visiting motorists by New Jersey.

Judge Hotchkiss got facetious when he asked "What is wrong with Jersey justice, when applied to motor users, particularly those from other States?"

"Your people are not unlike ours," said the speaker. "Many of you pass the days in our metropolis; your streets, your municipal services, your buildings, your general laws are much the same; and to-night, this Lucullian board and this your generous hospitality-why, even New Yorkers could do no better, perhaps, not so well. More, as 1 stepped from the ferry and walked to the train to-day, I was not halted and asked whether I had registered and been tagged from Trenton, though the officer on guard must have guessed that I would, ere long, help wear out your sidewalks, be guided by the radiance of your street lights and enjoy the protection of your police. And yet. I was not stopped and numbered! Nor has any peace officer yet demanded that I execute a power of attorney to some unknown official over on the Delaware through whom New Jersey could retain jurisdiction of my body and property, in case I might heedlessly violate your laws or accidentally invade the rights of Jersey men. So for me, to-night, it's: Hoch to Jersey justice! For, gentlemen, let it be recorded that, on this day of grace, the sixth of February, nineteen hundred and eight, a New Yorker and a motorist boarded a ferry boat, with deliberate intent to use your streets and sidewalks and purloin from you, for a time, all those public services which make modern life so easy, and that, after using them as freely as the air he breathed, he is here in Newark to-night, unlicensed, untagged, unattorneyed-and still at large. You know the reason. Like tens of thousands more, in setting out for New Jersey, he left his automobile at home.

"And so I again ask: What's the matter with New Jersey in dealing with the motor car? Prejudice has existed in New York. rustic Dobbins still sometimes shy at the newfangled wagons, drastic ordinances have been passed, and weird laws enacted, and at times enforced. Yet, for nearly four years cur motor vehicle law has proved so acceptable as not to require amendmentframed by motorists it was passed unanimously by a legislature dominated by the farmer vote-strangers are free to use our roads, without registration or tax; motor vehicle licenses, with us, are unheard of; accidents, save in congested territories, relatively rare; speed traps, except on the borders of the Greater City, all but unknown."

The speaker showed the difference in New Jersey, where the miles-per-hour speed clause is enforced literally, and told of a friend who made seven contributions one day last summer, and who vows henceforth to keep his purse out of New Jersey. Judge Hotchkiss seemed to think that the answer to the question "What is wrong with Jersey justice" is that there has been lack of cooperation between motorists, which has hindered the passage of laws that would be satisfactory to all users of the roads. Other reasons, he pointed out, were that the prejudice of the horse owner has not, as elsewhere, materially decreased, while the desire for revenue from "outlanders" seems to have become a settled fact in the State policy.

Judge Hotchkiss advocated a rational speed rule, by which speed would not be determined by a miles-per-hour clause, but by whether the operator in his driving endangered the life and limb or property of the public. He also asked who owned the roads, anyway, and answered the question by asserting that they belong to the State and as such should be maintained by the State and not by any particular class of individuals. "In advancing civilization the roads should be made to fit the traffic and not the traffic to fit the roads." The speaker closed his address by declaring that the present New Jersey law is "against principle, courtesy and self-interest."

In replying, Governor Fort said he didn't want the impression to be gained that he was in sympathy with the speaker's views. The Governor declared that if in disputes arising from violations of the speed laws the issue were left to a jury the accused "would have no show," while the fixing of a speed limit, he declared, resulted in fewer convictions for over-speeding than if left discretionary. As to the taxing of outsiders the Governor said that New Jersey was peculiarly situated, affording direct highway between New York and Philadelphia, while its coast resorts attracted touring parties from both States in greater numbers, with the result that Jersey roads were used almost as much by non-residents as by those who lived within its borders. They should contribute accordingly toward maintenance of the roads, he added.

ONE MORE BROADWAY PALACE

Palmer & Singer's New Building and Its
Equipment—Special Provisions to
Prevent and Fight Fire.

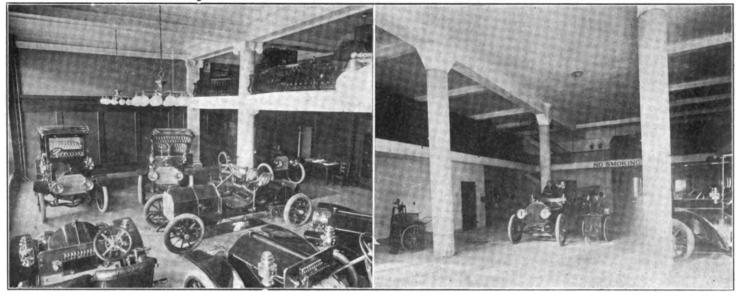
With the opening of the Palmer & Singer building at 1620 Broadway, another impressive structure has been added to the "automobile palaces" that mark that famous New York thoroughfare.

This Palmer & Singer establishment is five stories and basement, constructed of

the boiler room and power plant for elevators, etc., while a third compartment contains water pumps for the high pressure fire supply and roof tanks. In the cellar also are three pits over which cars may be run for simple repair work which can be done without resource to the shops above. The turntable and wash stands are also here close at hand to the immense elevators.

The main floor contains the salesroom where the 50 horsepower Simplex is to be shown together with the three cars of the Palmer & Singer line, the P. & S. four-forty, six-sixty, and a town car, also the Selden

accommodation of the auditor, cashier and bookkeeper. The Seventh avenue end contains 150 lockers for chauffeurs and a platform for the use of the checkers who will note the incoming and outgoing of cars and record the movements on a time clock. On the floor above, the Broadway end is ocsupied by the executive offices. Back of these is more garage space, easily accessible by elevators. The Seventh avenue end is equipped for the comfort of the chauffeurs, with lounging and music rooms, pool tables, shower baths, a barber shop, card room and a bar serving "soft" drinks.



MAIN SALES ROOM

MAIN FLOOR, SEVENTH AVENUE SIDE

reinforced concrete. It occupies the entire plot running through to Seventh avenue, thus affording a frontage on both streets.

In designing the building, the architects had in view not merely the convenience of its occupants and the expeditious handling of its contents, but the safety of both. Unusual provisions have been made to render the structure proof against fire or to closely confine any fire that might occur.

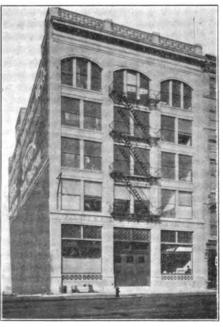
Throughout the entire building an elaborate system of standpipes with hose connections have been installed, the force for the water being obtained from powerful pumps in one of the cellar vaults. These pumps supply also tank of large capacity on the roof so that in case of a fire the water supply and the force behind it will be adequate for any necessity.

The elevators are many and commodious. No extreme care will be necessary to place a car in an exact position on them, as a generous allowance has been made, sufficient for any limousine or large touring car. In front of each elevator is a turntable so that cars may be easily handled without the extensive manipulation required where this important apparatus has not been installed.

The cellar comprises several vaults, each separate and walled off from the others. One contains the gasolene vaults, another

light touring car. The sales force will have their desks in this room behind which will be the garage with its entrance on Seventh avenue. Facilities are also provided for washing cars in the garage.

The mezzanine floor is arranged for the



PALMER & SINGER BUILDING

The balance of the floor is reserved for the machine shop, where twenty cars may be repaired at the same time. The equipment is very complete, comprising lathes, speed drills, drill presses, milling machines, planers, grinders, buffers, etc., a forge and portable crane, the latter for use in removing engines, transmission and other heavy pieces. The shop contains four pits, and was designed that the greatest amount of light should be obtained. Twelve skylights covering almost the entire roof, materially assist this purpose. There are work benches and accommodations for the many men necessary to the rapid facilitating of the work.

The third floor is devoted entirely to storage, with a capacity of over 60 cars. This room, like all the others of its kind, is supplied with turntables and wash stands, and as it is intended that practically all the washing of cars is to be done here, the other garage floors must of necessity be dry. The fourth floor is also to be used exclusively for storage and covering, as it does, an area equal to the whole ground site, it affords in connection with the other space devoted to the same purpose, an area sufficient for the storage of an immense number of cars.

Prominent among the features of the fifth floor is a commodious drafting room



room.

with every facility for the experimental

work-on new ideas that may be incorporated in the Palmer & Singer product. Ad-

jacent to the draughtsmen's quarters is the

stock room, where a complete line of parts

will be constantly on hand to expedite the

general repair work. There will also be

on this floor a large and well equipped tool

Why Wooden Conduits are Unreliable.

the secondary wires to be contained in

wooden boxes or troughs placed above the

cylinders there are persons who still adhere

to this form of conduit which was once gen-

eral. Though wood in itself is a non-con-

ductor when dry, when wet it furnishes an

While it is not commonly the custom for

THE MOTOR WORLD

DETROIT SEES ITS SECOND SHOW

Tri-State Association's Seventh Annual Exhibition Opened Brilliantly—Some
New Comers Among Exhibitors.

Detroit this week is enjoying an automobile show—the second to be held there this season. The first was promoted by the Detroit Automobile Dealers' Association, and while the competition is felt, the present exhibition—the seventh annual of the Tri-State Association—makes a brave showing.

Although many well known cars were missing at the opening last Monday night, 10th inst., at the Light Guard armory, for

land Motor Car Co., Oakland; Rapid Motor Car Co., Rapid; Brush Runabout Co., Brush; Blomstrom Mfg. Co., Blomstrom; Anderson Carriage Co., Detroit electric; Standard Automobile Co., Packard; Fee-Bock Auto Co., Elmore and Pope-Waverly; Motor Car Co., Cartercar; Wayne Auto Co., Wayne; Reliance Motor Car Co., Reliance; Jackson Automobile Co., Jackson; International Harvester Co., International Auto Buggy.

The other exhibitors are: Ajax-Grieb Rubber Co., C. M. Preston, Michigan Storage Battery Co., Diamond Rubber Co., Desmond Speedometer Co., Wildenpin Tire Co., Charles E. Miller, Gemmer Mfg. Co., Pittsburg Lamp & Bross Co., Michelin Tire Co., B. F. Goodrich Co., Morgan & Wright, Con-





THIRD FLOOR, STORAGE AND CHAUFFEUR'S ROOM IN PALMER & SINGER BUILDING

outlet for the high tension current that is responsible for short circuits with the accompanying misfiring that often prove a serious annoyance to drivers and cannot be readily discovered. Far better than the wood box is the fibre tube into which the four secondaries may be put or the smaller tube to contain only one wire, each of the leads having its own conduit, the fibre will not absorb moisture.

Care to be Exercised Before Cranking.

While it seems almost unnecessary to suggest to any one competent to drive a car that care should be taken to have the emergency brake set and the speed lever in a neutral position before cranking the engine, yet the frequent accounts of accidents caused by negligence in these matters are an evidence that many drivers fail to realize the importance of a simple precaution for their own safety. The habit of always looking at the control levers before starting is one easily acquired and when one realizes that small boys have a tendency to play with everything within their reach, the necessity of making sure of the position of the spark, throttle and speed controls is of prime importance.

the reason that they had staged at the previous show, several representative makes are much in evidence, among them being the Cadillac, Northern, Aerocar, Brush, Packard, Elmore, Pope-Waverly, Wayne, Oakland, and Reliance. Two new cars also make their appearance. The International Harvester Co.'s high wheeled buggy, although first exhibited at the State fair some months ago, was shown for the first time at au automobile show. The Regal, the newest Detroit product, also was displayed in both runabouts and touring models.

The show opened on Monday night with welcoming addresses by Governor Warner and Mayor Thompson in behalf of the State and city, respectively. The decorations are in maroon and white, and as the booths are uniform, harmony is maintained. The main floor has been given over to the car exhibitors, the gallery containing all the accessories exhibits. Motorcycles have the entire drill hall to themselves. The exhibitors showing cars are:

Cadillac Motor Car Co., Cadillac; Northern Motor Car Co., Northern; Aerocar Motor Co., Aerocar; Welch Motor Car Co., Welch; Crescent Motor Car Co.; Fee Electric Car Co.; Regal Auto Co., Regal; Oak-

tinental Caoutchouc Co., Jones Speedometer Co., C. F. Splitdorf, Goodyear Tire & Rubber Co., G & J Tire Co., Hartford Rubber Works Co., Heinze Coil Co., Norris Auto Co., Hibbard Engineering Co., Fisk Rubber Co., N. Y. & N. J. Lubricant Co., Perfection Non-Skid Climber Co., Witherbee Igniter Co., J. L. Gibney & Bro., Auto Igniter Co., Visor Knitting Co., Elastic Tire Filler Co., John H. Thompson & Co., Economy Cycle Co., Palm Engineering Co., Seitz & Co., F. Kicherer, Light Mfg. and Foundry Co., W. E. Metzger and Excelsior Supply Co.

Device to Aid in Applying Tires.

Because it is deemed more difficult to apply a tire to the rim of a wheel when that rim is a demountable one, than when it is a fixture, a foreign inventor has lately devised a special form of tire manipulator consisting of a stand carrying a spider adapted to grasp the rim from within and hold it securely while the tube and casing are being applied. In addition to this, the fixture contains within the frame and attached to the spider, a three-cylinder air pump which may be actuated by rotating axle about which the spider is mounted.

CHAUFFEUR ON CHAUFFEUR STATUS

The Calling not Unsuited to Men of Refinement—Feminine Arrogance Blamable for Some Aspects.

Like the servant question, the chauffeur problem is always with us, and in many respects woman is as deeply at the bottom of the one question as she long has been at the other.

The status of the professional automobile driver is far from settled, in fact, the relative position of the chauffeur in the staff of employes or servants of the household is so far from being definitely fixed that the interesting question as to whether he ranks with the secretary, the valet or the coachman is one that must be answered, and by that answer will be largely decided what type of men are to be entrusted with the lives of family and friends and the care of an expensive vehicle which may easily be mishandled, or ever worse, permitted to be destroyed by failure to take proper care of its mechanism.

I have been a professional chauffeur and as such encountered the difficulties and drawbacks of the work, even as I experienced the delights of driving a car, and I stoutly maintain that I am honest, despite the assertion by a cut rate second hand automobile dealer that honesty is rare, if not indeed entirely absent from the makeup of men of the wheel. I have accepted the commissions offered by dealers from whom I have bought supplies and have in turn given them to the employer who paid the bills, but I can readily understand that this statement will not be believed by the seller or purchaser of second hand cars or supplies whose business would naturally bring him in contact with only that class of chauffeurs whose transactions proclaim them to belong to a type with which this article has little to do.

The question of what grade of men is ultimately to be considered as the typical chauffeur can be answered by saying that it depends on the treatment which they will receive; and that depends very largely on the position taken by madame.

I read the assertion of Price Cutter and Bargain Dispenser Froelich of the Times Square Automobile Co. in last week's Motor World, that "all chauffeurs are crooks," and I don't agree with him. Coming from Froelich I would not give the matter much thought and certainly would not break into print on a subject introduced from such a source, but as there are some good, substantial citizens who have expressed themselves on the chauffeur question in such a way as to show that they have come in contact with only a certain element of the professional drivers I am glad of the opportunity to take up the subject and suggest the other side of it, that side which treats of the capable, self respecting employe.

If chauffeurs as a class have a bad name, it is because of the notoriety given a few of their number, but it has not been thieving or dishonesty that has brought the disagreeable prominence. Generally their presence in courts was due to speed law violations, and their ill repute with a portion of the public is almost entirely because of selfishness in refusing to yield a right of way and their inexcusable retorts to persons who have insisted that highways are for general traffic instead of for the exclusive use of automobiles. I think any one will agree with me that the criminal courts hear more charges in which bankers, lawyers and clergymen are defendants than they do of chauffeurs accused of dishonesty; reckless driving may be criminal, but it is not dishonest.

Another thing that has helped to strengthen the opinion that drivers are an illiterate, uneducated species, is the custom of "smart" writers of stories in which chauffeurs figure to put into the latters' mouths words and phrases suggestive of the street gamin. They are made to say "Naw" for "No," "Whatcher" for "what are you" and hundreds of other solecisms which I have heard few of them use, and which I venture to say would be as unintelligible to them as the lingo of the hobo.

I grant that there are chauffeurs who are the outcasts of the race track and livery stable, but they are in the small minority. There are others—a great many of them who are expert machinists, men who have served their apprenticeship in machine shops -careful, steady men, self respecting and competent, who prefer the outdoor life to confinement at the lathe or miller; they are not college men, but they have had a good grammar school education and are by no means dishonest or ruffians, or even "tough," and there is still another and smaller class, made up of college men, some of them even graduates. They are professional chauffeurs, because the work, in itself, is entirely congenial, and because the outdoor life and the feeling of control and of responsibility appeals to them. It affords chances for touring through the country and the pay is far better than can be secured in most office and store pursuits. Another thing that is responsible for the presence in the ranks of men who have had the advantages of an extensive education is some physical disability. I do not mean that broken down cripples or physical wrecks are driving automobiles, but I do mean that there are very many instances where the outdoor work is being done by men who are correcting or checking some slight lung or throat or nervous trouble, which outdoor life is the only means of remedying. I know also of cases of men who were fitting themselves for a profession, studying medicine and reading law. whose ambition was responsible for a too close application to books, which led to warnings from the occulist so much dreaded by the student. meant an entire change of life, and what is better or more delightful than the seat behind a steering wheel? Is there any comparison between that and a life behind a desk or counter, which holds small promise, while the former affords an adequate remuneration and gives an opportunity for eyes or health to regain a condition that will permit of the resumption of studies? Is there any comparison between the close, foul air in a shop which so enervates as to sap one's vitality and make it impossible to perform even small effort at night, and the fresh air of the streets or country which exhilarates and makes possible a judicious use of the eyes when the day's work is done? Positively there is no comparison, and many refined and educated men have realized it while many more will do so; and the time will come when a tough element will be absolutely foreign to the ranks of professional chauffeurs.

Of course there are drawbacks which will affect the man of refinement. He does and always will refuse tips. He would prefer that they be not offered. The temptation to accept a five or ten dollar bill, and sometimes a twenty, is very great, but I know men who refuse it. They refuse it on principle, declining to be placed on the level with cab drivers, barbers and waiters. This type of man looks upon his work as being of a more or less confidential nature. He attends to many things for his employer which could not be entrusted to a valet, but which are not of sufficient importance to occupy the time of the secretary. He hears the private communications which take place in the car and appreciates that these confidential talks are possible only because the owner believes that his chauffeur can be relied upon. With an irresponsible driver this feeling of security is impossible.

It is true that a certain element are grafters. They do look for commissions and will deal only with firms who give them. Naturally these men have no interest in their employer's welfare and will buy an inferior article at a high price for the sake of the rake off to them in preference to purchasing a better grade that is sold at so low a figure as to make discounts impossible. A grafting chauffeur is a mighty expensive parasite. Not satisfied with commissions on things bought because of actual need he will create the need for the sake of more commissions. Tires are a means of an almost definite income. I know whereof I speak. When you see a chauffeur driving his machine on the car tracks. with a good highway right at hand, you can come mighty close to betting on a sure thing if you wager that he is trying to use up tires that he will replace by buying of a house that gives commissions. Why, I can name a place where they will give me \$40 on every set I buy, and the tires are mighty poor ones, too. But this class of men is not

typical. Occasionally they are met with and they are usually so loud mouthed that you give ear to them and imagine that they are representative because by their noise they dominate. The quiet, self respecting chauffeur has none of these experiences that he can relate, and so is so seldom heard of that many do not know of his existence. too often when the chauffeur subject is discussed, the debate revolves around some low born rascal who has made a nuisance of himself and given an entirely false impression.

If employers would expect the drivers of their cars to be as neat and respectable as the clerks in their stores or offices, and would treat them with the consideration and respect that they show these clerks they would be taking a long step toward raising the standard of the men and one which would result in securing an enthusiastic and consciencious service with the result that repair bills and replacement charges would be so reduced that automobiling would cease to be an expensive luxury as is now the case when irresponsible drivers are employed.

The matter of wages is to be considered, too. Of course an inflexible rule cannot be adopted. The nearest to a standard that can be adopted which to my mind is equally fair to both parties would be to pay a man as much as he could earn in another business. Driving a motor car is not a profession; in fact, at this date it scarcely can be called a trade. There is no apprenticeship to be served, no long course to be studied. The competent chauffeur requires intelligence, some mechanical experience and native ingenuity and with these personal attributes he is not dependent on only the one class of work but can find a market for his ability in some pursuit other than that of driving an automobile. To pay \$25 a week—the usual price in cities—to a person who could not get over \$12 or \$15 in any other work, is as absurd as it would be to pay the latter sum to a man who can earn \$25 a week in some other work. Personally, I want to see the riff-raff driven out of the ranks and there's no better or quicker way of doing it than by paying just about the figure that the world puts on their ability.

Sometimes chauffeurs are heard comparing themselves with locomotive engineers, which is the sort of talk that makes a thinking man weary. Nobody ever saw a train in charge of an 18-year-old boy. The one job takes years of training, the other requires only the amount of a state's registration fee. Weed out the ignorant, grafting, undesirable element and you make room for the decent chap who is a desirable acquisition.

The most serious obstacle, however, to the educated man is the attitude of "milady." Invariably she insists that chauffeur and coachman are on the same plane. She wants her servants to be liveried—an impossible condition for the man of refinement. She wants him to act the part of the flunky; to touch his hat when she speaks and in all things to offer an outward sign of subservience. As a result she usually has a man who can steer the car, but who cannot make more than the simplest repair. When a puncture or blowout occurs, it means a drive on flat tires rather than to soil the white breeches and broadcloth uniform coat, and altogether the situation is absurd and incidentally impossible.

The time is not far distant when the better class of men are going to be in such demand that concessions will be made by many employers in the hope of enticing them into the field. When they succeed the restaurants and roadside inns will provide suitable accommodations for chauffeurs apart from the servants' quarters, and the man whose soiled hands and clothing make it impossible for him to mingle with the patrons of the place will yet find a niche where he can eat in peace and with dignity, which he cannot do at the tables reserved for cooks, hostlers, bootblacks, etc. The arrival of that period will be quickened when "the lady of the house" realizes that it is possible for a chauffeur to be as much of a gentleman as the man who tutors her children and treats him accordingly.

But to go back where I started: When I read Froelich's assertion that chauffeurs were "dirty, low and dishonest," I recalled a story of an old veterinary in the town I hail from, who one day prepared a powder for a sick horse and gave it to his new assistant to administer. The assistant asked how it was to be done, and the doctor gave him a large glass tube and told him to put the tube into the horse's mouth and blow the powder down his throat. A short time afterward there was a great commotion and the doctor rushed out to find his assistant in trouble.

"Where is that medicine?" he shouted. "What's the matter?"

The assistant coughed several times severely and then spluttered:

"The horse blew first." -M. R. L. C.

Why Some Tires are Selected.

"Oh, it's been a pretty good day for me, all right," said a loud mouthed chauffeur as he entered the chauffeur's room in the garage and removed a handsome fur coat that his employer had given him for Christmas, and after lighting a cigar, dropped into a comfortable chair. "I've done pretty well, I had to have a set of tires, so I went to a cut rate house. I looked at the tires and asked the 'bargain man' if they were good. They are not as well known as some other tires, but he said that they were all right so far as he knew, but he ducked when I suggested guarantee. 'They may be all right," he said; 'some last and some don't, but there's 40 per cent. in it for you if you take them; so I took \$150 worth and pocketed \$60 for mine, and that's only a starter, for the quicker they wear out the sooner I'll get some more."

"But how about your boss?" asked another. "It don't seem to me that he is getting a square deal on that sort of a tire."

"He can stand it," responded the grafter.
"If he's got money enough to own a car
he can afford to pay my commission, too.
I'm looking out for my end and he can
look out for his."

"Well, I call it a pretty rotten way to treat a decent man who gives you a \$100 coat; besides there's the question of honesty in that sort of a transaction."

"Oh, hell!" ejaculated the first speaker, "What's \$60? I know one fellow who got \$1,400 for recommending a certain make of foreign car which his boss bought. He got caught and lost his job, but I'll lose mine for that price any day. A fellow can afford to loaf when he gets a lump like that."

Chauffeur-Actor as Elephant Legs.

Most men as a rule play many parts during their lives, sometimes of their own free will, frequently in deference to the dictates of necessity. Perhaps the greatest "Jekyllhydeians" are actors, who frequently are called upon to double parts. It has remained for a chauffeur to attain the acme of versatility in this line, however. The driver of one of London's popular comedians was summoned at Litchfield on a charge of having driven his car without a rear light. He did not appear, but a letter was read from his employer, pleading as an excuse for his absence that he was engaged at the Theatre Royal, Manchester, " playing the part of the front legs of an elephant." While in England it is constantly advocated that chauffeurs should not limit their energies to the mere driving of their employers' cars-in fact, gardening, butlering, nursing and so on are prime requisites in a good chauffeur-still it would seem that the curriculum is somewhat extended to include the Thespian portrayal of the front legs of an elephant. It is feared that the whole of England's nursemen-chauffeurdom will be up in arms at the idea of one of its members gamboling about on the stage disguised as the anterior portion of a pachyderm.

Ready Bail for Prospective Prisoners.

Surety company bail bonds are to be available for members of the Long Island Automobile Club any time they may happen to be arrested for alleged violation of the speed law. The difficulty of securing bondsmen upon short notice and the consequent trouble that ensued caused this matter to be brought up before the club's board of governors at their last regular meeting. The governors decided to secure the bail bond, which will be furnished upon request of any member.

"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.



BING!—THEY'RE OFF FOR PARIS

Immense Throng Sees Start of "Newspaper Race"—Snow Shoveling Begins on Very First Day.

No circus parade ever drew a greater concourse of people than did the start of the trip six automobiles may make from New York to Paris, from Times Square, New York City, yesterday, 12th inst. There is no way of computing the number that gathered at Forty-second street and Broadway and that lined the latter thoroughfare

charge got beautifully mixed and as a result few people could locate the cars to which they had been assigned.

Mayor McClellan intended to fire the pistol to start the cars on their long trip, but somebody or other told the Mayor that affairs of this sort never start on time, and as a result the city's chief executive did not hurry through his morning bath. At 11 o'clock the Mayor had not appeared at the special grandstand erected on the Seventh avenue side of Times Square, so it was decided to wait for him fifteen minutes. As he was still missing at 11.15, Colgate Hoyt, president of the Automobile Club of Amer-

clad from head to foot in white fur, excited the most comment. It was the occupants of the escorting cars, however, who received the bombardment of snowballs.

Although it was arranged that the cars should reach Albany, 148 miles, before night, not one of them got that far on account of the snow that covered the roads. The Thomas, Zust and De Dion cars reached Hudson, 116 miles, where they stopped over night. Roberts, in the Thomas was the first to arrive there at 8.20 p. m., followed an hour later by Sirtori, in the Zust. St. Chaffray checked in fifteen minutes after Sirtori. Maas, in the Prothos.



START OF THE NEW YORK-PARIS "RACE" FROM TIMES SQUARE, NEW YORK

its entire length, to obtain a glimpse of the specially equipped and heavily laden cars, but the crowd surely was away up in the six figures. As an advertisement the affair was a great success and proved how many people will go to a little inconvenience for the privilege of seeing something for nothing.

The occasion was the start of what its promoters term an automobile "race" from New York to Paris, which originated in a French brain. It is more of a go-as-you-please any-old-thing sort of an affair, as although there is plenty of land between California and the Bering Straits, the contestants will embark on a boat from San Francisco to Valdez, Alaska, providing they reach the California city, of which there is considerable doubt. The rumor was affoat yesterday that the cars would be shipped to San Francisco by train, after leaving Chicago. This, however, could not be confirmed.

The police had considerable difficulty in holding the immense throng in check at Times Square. Several hundred automobiles were packed in the square, and side streets, but whoever had the parking in

ica, fired the gun for the start, and the six specially equipped cars, and an escort of several hundred cars, many of them decorated with flags, proceeded up crowd-lined Broadway. The cars that started, and their occupants, were:

Thomas (American), Montague Roberts, driver; Harold Brinker and W. J. Henly.

Prothos (German), Ernst Maas, driver; Hans Knape and Lieut. H. Koeppen.

Brixia-Zust (Italian), Emilo Sirtori, driver; Henri Haaga and Antonio Scarfoglio.

Sizaire-Naudin (French), August Pons, driver; Maurice Berlhe and Lucien Dechamps.

Motobloc (French), Charles Godard, driver; Arthur Hue and R. Maurice Livier. DeDion (French), Boursier St. Chaffray, driver, M. Austran and Capt. Hans Hansen.

It was an imposing procession that paraded up Broadway. Crowds of people lined the streets and cheered the tourists while small boys threw snowballs. Montague Roberts, driver of the only American car in the contest, and from which trailed a large American flag, naturally received the greatest applause, while the De Dion crew,

decided to stay at Poughkeepsie over night, while the other two cars, left behind in the first fifteen miles, thought Peekskill, 44 miles, far enough for one half day's journey. All of the cars had trouble in the snow drifts, and only strenuous shoveling served to dig them out.

As the chances of any of the cars getting to San Francisco before the roses bloom are 100 to 1 against them, unless they go by railroad, it would seem that Godard and Pons, in charge respectively, of the Motobloc and the Sizaire-Naudin, have hit upon the right idea—to enjoy themselves while they may, by not rushing things. The crews of these two cars stopped at Dobbs Ferry for luncheon and spent more than three hours to feast and to allow a moving picture photographer, whom they are carrying with them, to expose many yards of film. The Frenchmen did not seem in any great hurry to leave the open fireside in the inn at which they stopped.

From general observation and scraps of conversation picked up from the occupants of the cars, it is plain that the foreigners do not begin to realize the magnitude of



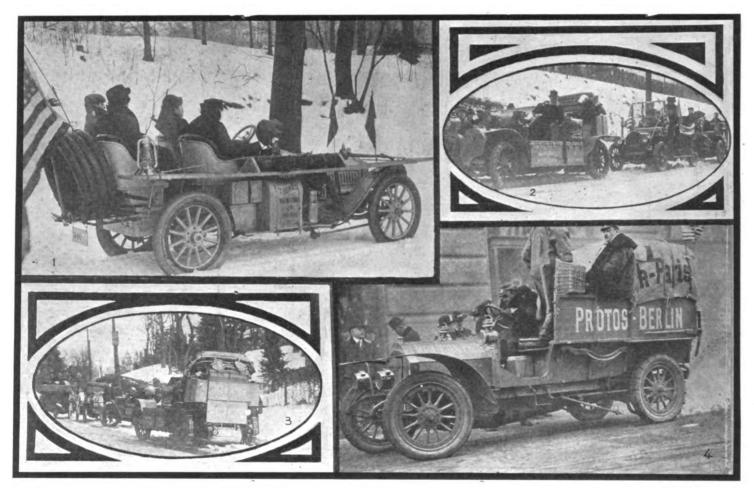
the task before them. They seem to think that the real journey will not begin until after they have crossed America and reach Alaska. They are possessed of the notion that roads in this country are not much worse than those in France. The gasolene tank on the Moto Bloc may be cited as an example of this ignorance of the foreigners regarding American highways. The tank is situated at the rear of the car, within six inches of the ground. The first big snow

ester, to say nothing of elsewhere. Near Rochester the snow, wheel deep, covers the ground, so that the contest is likely to resolve into a shoveling match before New York State is left behind.

There are really two "races" from New York to Paris, via Alaska, under way. For on Tuesday afternoon, a Werner car left a newspaper office on Park Row, New York City, in charge of Eugene Le Louvier, but taking the unusual route by way of Philadelhorses, or dissembling the cars and packing the parts in carts or on dog sleds, or any other old thing is permissible in "races" of this sort, there is no telling what may happen or what the "contenders" may or may not do.

San Antonio's Absurd Speed Limit.

San Antonio's (Texas) city council has passed an ordinance that "goes the limit" for absurdity. Because of the excellent



1, THE LIGHTLY-LADEN THOMAS. 2 AND 3, THE MOTOBLOC STOPPED FOR LUNCHEON AT DOBBS' FERRY. 4, THE HEAVILY-LADEN PROTOS

drift or sharp rock may show that it has been misplaced.

With the exception of the Thomas and the little single-cylinder Naudin, all the cars, with their elaborate equipment, labor under too much weight. The De Dion, loaded, weighs 6,600 pounds; the Zust, 3,520 pounds; the Prothos, 6,000 pounds; and the Moto Bloc, which seemed to have some difficulty in climbing several of the hills between New York City and Tarrytown, tips the scales at 6,325 pounds. What will happen to them if ever they reach the Rocky Mountains, does not make pleasant surmise. Included in the equipment of the lastnamed car are three cases of champagne.

All the cars carry rope, ladders, block and tackle. shovels and picks, which, perhaps, is a fortunate thing, as the snow encountered between New York and Tarrytown is nothing as compared to that which will cover the ground in the vicinity of Roch-

phia, Cincinnati, Kansas City, St. Louis, Cheyenne, Portland and Tacoma. It will attempt to beat the other six "racers" although it already seems practically out of the running. The car balked before it got on the ferry boat to transport it to Staten Island, and some of its mechanism went wrong five minutes after the ferry trip ended. After a stop of two hours and eight minutes it was persuaded to run into a gror cery cart. Five stops for repairs were made between New Brunswick and Trenton and at 10.15 p. m. Tuesday it skidded into a snow drift at Tulleytown, Pa. It was still stuck in the drift at 2.15 a. m. Wednesday, when two touring cars came along and took turns towing it to Frankford. The three Frenchmen managed to get the car to Philadelphia by 5.30 o'clock and spent the rest of yesterday in bed. Their "death" is soon expected, but as "rebuilding" cars en route, or shipment entire by boat, or hauling by

streets and 185 miles of fine macadam leading out of the city some scorehing is said to have developed, to break up which the council has passed an ordinance establishing speed limits of three miles an hour in the business section of the city, five miles an hour in the residence section and eight miles an hour in the suburbs. When turning a corner automobiles are required to slow down to two miles, while a fine of \$200 may be imposed if the driver fails to stop on signal of a policeman.

Folwell President of the Quakers.

P. Donald Folwell was unanimously chosen president of the Quaker City Automobile Club, of Philadelphia, at its annual meeting last week. A. T. James was elected first vice-president; L. D. Berger, second vice-president, and A. T. Stewart, was re-elected treasurer. Harry C. Harbach was elected secretary.

REMOTE CHANCE TO REACH PARIS

Terrors of Route Told by Real Travelers— Cars May go Through, if Deer or Dogs are Available.

It has been interesting to follow the development of the plans of the New York-Paris race as they have appeared in print from day to day, says V. Steffannson, who was a member of the Anglo-American Arctic expedition. Af first the promoters were undecided between two promising routes -should the machines cross to the Pacific coast south of or near the Canadian boundary, then follow the coast northward to Skagway, Alaska, and proceed thence over the mountains to the Yukon at White Horse?—or should they go from Winnipeg to Edmonton and then across craggy ridge and wooded dale by the mounted police pack-horse trail to the Yukon? In either case they were to proceed "down the Yukon on the ice," and "across Bering Straits from Nome to East cape" (also on the ice). A good many highly diverting opinions on both schemes were secured by enterprising reporters from men whose official titles sound as if they should know more than they do about the north. A person of high political standing in Canada was said to "regard the Edmonton route as feasible," and one of the first men in the geological department in Washington was quoted (correctly?) as saying that "once on the tundra" the autos could get along without much trouble, for they would be able to go along on top the hard-packed snow!

The coastal route from Vancouver to Skagway was soonest abandoned. Perhaps some summer tourist had noticed the cliffs that alternately come perpendicularly to the sea or are covered to the water's edge with close standing, burly evergreen trees. Perhaps this tourist had even gone ashore; his experience may then have suggested to him that where a man in leggings squeezes between trees with difficulty, a six-cylinder car might have its troubles. As for the Edmonton route, a humorist did for that overmountain scheme. He suggested (and a reporter took him seriously) that as the police trail was barely practicable for dog sleds and pack ponies, and was, beside, in many places too narrow for a machine, it would be best not to try following the trail, but to strike straight across country, making a bee line for Dawson. A man who has succeeded in having this opinion quoted seriously in a newspaper has therein sufficient cause to feel he has not lived in vain. Taking an automobile up the most pathless slope of Mount Washington would be a boulevard compared with crossing the forested ridges of the 2,000-mile wilderness that separates Edmonton from Dawson,

Both these startling wilderness-crossing projects weakened gradually and finally

died a quiet death when the much advertising of the race began to bring the opinions of real travelers into the news offices where these routes had been laid out on the wall maps. The machines are expected to make San Francisco in about thirty days and to reach Valdez on the south coast of Alaska by steamer in late March or early April. Thence they are to go over the government mail trail north to Fairbanks on the Tanana, down the Tanana to the Yukon, down the Yukon to its mouth and thence over the land ice to St. Michaels and Nome. Even this plan, a thousand per cent. more sensible than the ones tentatively outlined at the start by the newspaper promoters of the race, will bear careful re-

The thirty day schedule across the continent can doubtless be maintained or bettered, and the late March sailings from San Francisco via Seattle are therefore likely to bring most or all the contestants to Valdez by the first week in April. Then comes the over-mountain trail to Fairbanks. The snow on it is usually so hard packed by much travel that it may be "negotiable" for machines, though one cannot help reflecting that the lighter and more readily dismemberable a machine is, the cheaper and easier it will be to freight it by horses or dogs if necessary. One is also prone to wonder (if one or more machines get to Paris finally) whether the several thousandmile section of the journey from San Francisco to the made roads of Siberia will have been an automobile race at all, or merely a contest in shipping dismembered engines over swamp and sea.

But granting that the machines could get over the trail to Fairbanks, it may seem on paper as if most of their difficulties in reaching Nome were over. "And thence on the ice of the Tanana and Yukon rivers to Nome," looks feasible enough when you read it in your morning paper at breakfast.

But the trouble is this: It is seldom that any considerable stretch of one of the great northern rivers freezes smooth. The Indian sleds that follow the Mackenzie travel less on the ice than along the banks, for the surface of the stream is not smooth and even, but is jagged as the broken bottles on top of an English stone wall. In the fall the stream has frozen half an inch or two inches thick; then this thin ice has been broken into a jumble of cakes that tilt on edge and again freeze in that position. The Yukon is often heaped and piled so rough that the crossing of it from one bank to the opposite is a serious problem even with a dog sled, while the winter trails along it frequently go over the hills and seldom along the middle of the river. The machines will, therefore, be no less dependent on the made trail after reaching Fairbanks than before.

Having in anticipation brought his machines to Nome, the newspaper program writer tells us that the machines will "run across on the ice" to East Cape, Siberia, if they get "to Nome early enough in the sea-

son" (or, as he explains, by May 5 or 10). It seems a bit strange that all the Arctic literature which books, magazines and newspapers have spread over the country cannot get out of the public mind the idea that the Arctic seas are solidly frozen out in winter. So far north as human being have as yet been the winter ice field is broken into floes separated by strips of open water by even slight storms, be it midwinter or early spring, and whatever the temperature. But stranger still than the notion that the winter sea ice stretches solidly from shore to shore, is the idea that its surface is smooth after the manner of the Boston frog pond in January. Let people who think so read the records of any Arctic traveler from Parry to Peary. Or, seeing Alaskan seas are out of the question, let them glance at the story and published photographs of the Anglo-American Polar expedition. A heap of new blasted rock in a granite quarry is smooth compared with the surface of portions of the Alaskan seas, where blocks of ice rise on edge like the stone gables of ruined cathe drals. And as strange as either of these two ideas is, the third one that must be in the heads of those who plan automobiling over sea ice-that the snow on the ice is hard. It is hard in drifts, but between are areas where a man walking without snow shoes would sink to the knees at every step.

But all this talk about the racers crossing Bering Straits on the ice may have no other serious purpose than to make the trip seem more romantic to the stay-at-home. The season will not only be "too late" when they reach Nome (if they do), but it is scarcely conceivable, as the spring thaws will not allow them to get beyond Fairbanks on either ice or snow trail. If this place is reached before the beginning of the "break-up," that part of the valor which is high "discretion" will prompt the racers to stay till the ice is out of the rivers and the Tanana and Yukon steamers can take them to Nome. There they may take ship for East Cape (should not wisdom ere then make it clear to them they had better land at some more southern and more civilized port on the east coast of Asia).

The writer's personal experience, and his collection of photographs to back that experience, do not extend to Siberia. But he has friends who have walked over the Siberian "tundra" (which he has not seen) and over the American "barrens" (which he has not seen). These friends say that the "tundra" and the "barrens" are both in summer and winter much alike. The following things are true, then, of both.

The snow which covers the ground in winter is in occasional places drifted hard enough to bear a man's weight; in spots it might even bear up an automobile. But no more in the Arctic than on the Dakota prairie can one go many rods before coming to a softer area when even dog sleds and men on snow shoes will sink in to some extent. In these places a man without snow shoes will go in to the ankles or waist (ac-

cording to circumstances); what would happen to an automobile on wheels is not doubtful. One may safely smile a bit at the manufacturer who is going to equip his machine with "eight-inch tire rims to enable it to keep on top of the snow!"

The Russian general, Linnevitch, has written an article on the feasibility of the Siberian part of the race. One reads the cabled summary of this discussion with growing wonder, for he apparently makes light of the gravest difficulties. A thousand mile stretch of uninhabited snow waste is, apparently, not formidable in his eyes, and one begins to feel it no great wonder that the Slavic mind (if generally so sanguine), occasionally misplans a Siberian military campaign. But toward the end of the article comes a statement which raises the general's good sense considerably in one's esteem. His thesis, after all, is merely that if the machines get to Siberia after having conquered the difficult Yukon valley and Bering Straits, they will be equally able to master the more difficult Siberian 1,200 miles that lead to Nijni Kolimsk. He does not, therefore, commit himself at all on the whole project, but merely says if the one can be done, so can the other. And at the very end is a statement which places the Russian general in a class with our own Mark Twain. The substance of it is that the journey from East Cape to Nijni Kolimsk presents no insuperable difficulties to

machines that can be dismembered into parts light enough to transport on deer and dog sleds. And even this the cautious soldier qualifies by putting in a "provided the deer or dogs can be secured."

But if this journey to Nijni Kolimsk is to be made not in winter but in summer, it is interesting to remember that in summer the typical tundra is covered with a network of lakes from the melting snow. That part of the surface not covered with matz is mossy-not comparatively smooth, but hummocky with the so-called "nigger heads." Besides being rough, the surface has the moist softness of a wet sponge, and is a pretty continuous bog where the frost thaws out. To add to the poignancy of the racers' experience (if, again, they get this far) will be the Siberian mosquitoes. All the gathered hosts of New Jersey are a faint reminiscence to one who has encountered the winged clouds of bloodthirsty insects that hang like a fog over these northern swamps.

It would be foolish to say it is impossible to take an automobile from New York to Paris approximately along the route at present outlined for the contest; Cleopatra's needle could conceivably be freighted through the same country. What seems fairly safe betting is that none of the machines will, under their own power and on their own wheels, cover any considerable part of the thousands of miles that separate

San Francisco from Nijni Kolimsk and the first made roads of Russian Asia.

Personnel of the Racing Board.

Because, in the words of Secretary Elliott, of the American Automobile Association, "it is considered that the time has come when racing matters should be directed not entirely by amateur sportsmen appointed from the various clubs," the Racing Board of that organization hereafter will closely resemble a trade directory.

With the representatives of the trade who just have been made members, the full roster of the board now is as follows: Chairman, Jefferson De Mont Thompson, New York: vice-chairman, Frank G. Webb, Brooklyn; William K. Vanderbilt, Jr., Dave Hennen Morris, S. M. Butler, H. Rossiter Worthington, Alfred Reeves, Percy Owen, A. G. Batchelder and S. A. Miles, all of New York City; A. E. Pardington, Brooklyn; Charles J. Swain, Philadelphia; H. L. Bowden, Harry W. Knights and L. R. Speare, Boston; Benjamin Briscoe, Tarrytown; A. L. Riker, Bridgeport; R. Lincoln Lippitt, Providence; J. J. Mann, Paris; E. R. Thomas, Buffalo; S. L. Haynes, Springfield; George L. Weiss, Harry H. Knowles and Thomas Henderson, Cleveland; A. B. Lambert, St. Louis; George G. Greenberg and I. M. Cobe, Chicago; H. A. Bonnell, Newark, N. J.; Henry Ford, Detroit, and Asa Paine, Minneapolis.

AUTOFOID

This material is on the market in the following styles:

Single ply—leather faced on one side.

Single ply—leather faced on both sides.

Double ply—leather faced on one side.

Double ply—leather faced on both sides.

Double ply—leather faced on one side, whip cord back.

Double ply—leather faced on one side, Broadcloth back.

Double ply—leather faced on one side, Silk Mohair back.

Double ply—leather faced on one side, Sicilian back.

Double ply-leather faced on one side, Felt back.

Double ply—leather faced on one side, Silk Armure back.

Single ply—leather faced on both sides, one side being made up with mackintosh effects.

AUTOFOID can be found in any color desirable.

THE AMERICAN LEATHERETTE MFG. CO.

Branch PITTSBURG, PA. **Buffalo, New York**

Branch DETROIT, MICH.



FRONT DRIVING AND STEERING

Views of Two Well Known Experts on an Important Problem—Its Bearing on Power Economy and Control.

So firmly rooted are the ideas governing present methods of automobile design, that it is almost impossible to conceive of an upheaval taking place of sufficient magnitude to introduce to anything like a universal extent the system of front wheel driving and steering. Yet there are many considerations of a purely theoretical nature which point to such a change as being ideal, chiefly because with the propelling force applied directly in connection with the steering action, the tendency to skidding and unmanageability in deep mud or snow would be largely eliminated.

At the January meeting of the British Institution of Automobile Engineers, a symposium of this absorbing topic was presented by Dr. Hele-Shaw, inventor of the clutch which bears his name, and a wellknown scientist, and R. W. Harvey Bailey, an engineer who has been closely associated with experiments in front driving for a number of years. Several systems of front driving are in vogue at the present time, both here and abroad, but it is safe to assume that the average motorist has little or no comprehension of the soundness of theory upon which they are based. Historically, the front driven vehicle is very old. Says Mr. Bailey in this connection:

"As a matter of fact, the first steam vehicle, built in 1769 by Cugnot, was a three-wheeler, driving and steering on a single front wheel, while the first vehicle Hancock built was on the same lines exactly.

"Again, in 1862, we find Pattison in evidence with his combined front driving and steering four-wheeler, whilst in our own day, in 1895 and 1896 Messrs. Thornycroft made their first attempt at road locomotion with a vehicle that drove the front wheels, but steered by means of the rear wheels."

Probably, as he explains, the earlier attempts at front driving were instigated largely on account of the use of the threewheeled vehicle and the, then serious, difficulty of providing for differential action in turning corners, existing where two wheels were used in propulsion. All more recent attempts in the same line he ascribes to another trouble-universally prevalent, and "generally called 'skidding.' this may be, and frequently is, the result of bad driving, the author states it as his experience based on trials with both types, that basically it is an inherent trouble with the system of propulsion. When a car of the ordinary type is placed upon a turn, a difficulty arises which he explains as fol-

"It is at once clear that the force propelling the vehicle is, in a rear driver, parallel in its direction to the center line of the car, whereas the front wheels are set at an angle to this direction, varying to suit the exigencies of the moment.

"Analyzing the forces which are brought into action at the moment when an attempt to turn is made, it is plain that the car itself will only follow the curve as set out by the position of the rear wheels, because these lay out a curve of least resistance, resulting from the fact that the wheels are vastly easier to revolve on their axis than they are to slide bodily sideways.

"Although this is generally true, it is not always so; and as the resolved force along the direction of the turn becomes less, the greater the angle of deflection becomes, there comes a time when, if the roads are greasy, the resolved force is too small to act upon the vehicle and alter its direction, because the reaction of the road on the wheel caused by the propelling force is itself too small to prevent the wheel sliding bodily forward in the direction of the propeling force. This, then, is obviously one serious defect in the rear-driving car."

Front driven vehicles he divides into two general classes, as those in which the steer ing is done from the rear, and those in which the driving and steering are performed simultaneously from the front. The former he dismisses at length and for reasons already well known to those who have had experience with vehicles of the type of the electric cab species at one time so common in New York City service, for instance. Of the second class, he points out that "a very slight consideration of the conditions shows that, whether running straight or making a turn, since the steering wheels are also the tractors or drivers, it is plain that in this type at least since the propelling forces are always in the proposed line of travel, that here is a design which is mechanically correct, as the propulsive force tends to stability, being never predisposed to skidding."

Regarding the method of gasolene propulsion as applied to front driving and steering, he remarks that it is often subject to adverse criticism because of the great loss of power supposed to entail upon the use of the universal joint mechanism in the driving shaft.

"This notion is based upon the misconception that it is often working on a big lock, whereas, as a matter of fact, almost 95 per cent. of the driving is such that the joint is only a loose coupling in a practically straight length of shaft and as such, of course, has no movement in its individual parts; hence it cannot, while so acting, be a source of loss," he explains.

"There is, of course, a fairly large loss of power when the vehicle is turning on full lock (50 degrees), but even then the front driver would compare favorably with a rear driver on the same lock, because in the front driver the loss of power through the joint is more than compensated for in the fact that the front driver exerts its energy in

the direction of required motion, while a rear driver exerts its forces in a direction inclined at 50 degrees to the desired direction.

"Considering, finally, the benefits of the system, first and foremost stands the fact that front driving and steering vehicles are non-skidding—not that the author would mean that taking corners at full speed they will not skid, but that under ordinary fair usage they are non-skidding.

"It is only a question of grip in relation to the centrifugal force in such a case as above referred to, and it is obvious that making the speed high enough anything will fly outwards from its path; but even then—and this requires emphasizing—the act of turning the wheels, since these are drivers, will admit of some control, even under such circumstances."

Another phase of the matter is brought up by Dr. Hele-Shaw, who refers to from and rear braking—a subject which has recently been aired to a considerable extent in British motoring circles. "It is easy to see that so long as the vehicle is being propelled by the front wheels, the vehicle as a whole will only follow the tracks of the front wheels, and would not be inclined to skid," he says, "that is, assuming the back wheels to run easily; but it is not so easy to understand what happens when the brake is applied to the front wheels.

"It looks at first as if the free-running back wheels and most of the weight behind would tend to over-run the front wheels and slew round the vehicle, causing what is commonly known as a side-slip. On looking, however, into the matter a little more closely we see that the difference between the cases when india rubber and pneumatic tired wheels are free running and with the brake applied should be taken into account. It only needs simple experiment to demonstrate the fact that whereas a wheel of this kind when free running tends to move most easily in the direction of its plane of rotation, when the brake is applied the exact opposite is the case, and it is much easier for a wheel on a greasy surface to slip sideways than to move forward in 's own plane. We therefore have this result, that if the brake is applied on the front wheels, any tendency to slip may be checked by the driver adroitly using his steering wheel, the hind wheels which are free running following in the direction of the vehicle, without any tendency for the mass of the vehicle to swerve sideways. If, however, instead of the front wheels being braked, the brake is applied to the back wheels, it becomes an extremely difficult thing to prevent side-slip taking place, unless non-skid devices are used, even by skilful manipulation in steering the front

As to the comparative controlability of front and rear driven vehicles, he refers to several tests of his own recently carried out with a British front driven electric vehicle and another vehicle of practically the same



FOR ADJUSTMENT OF THE TIMING

Simple Attachment Adapted to the Use of the Inexperienced—How It is to be Employed.

To many drivers the possibility of some time being called upon to time the valves or ignition of the motor without any advice or help from more experienced sources, exists as a very real bugaboo. To obviate any difficulty on this score, a London supply house recently brought out a timing device which is wonderfully simple and, granted that the method of timing upon which it is based is one which is applicable to the average motor, should entirely remove my fears of disaster which the inexperienced engineman may entertain. In a word, the device consists of a small metallic disc which may be clamped to the clutch, fly wheel or some other moving part of the motor turning in synchronism with the crank shaft, and upon which are indicated the points on which the valves are to open and the ignitor circuit to close. The proper point is in every case located by means of a spirit level which gives an absolutely correct setting, provided the instrument has been properly adjusted in the beginning.

In order to adjust the timing of the valves for instance, all that is necessary is to turn over the crank shaft until the piston has reached the top of its stroke and then clamp the device in place, turning it so that the level is horizontal, and an arm to which it is connected registers with a point on the dial of the device which is marked zero. To facilitate this and the subsequent operations, the dial is perforated at the proper points, and a pin carried by the arm is made to fit into the holes in turn, thus locating the position of the level absolutely in every case. The pin and arm are then turned to the point marked "open" on the exhaust circle, and the crank shaft is revolved until the level again balances horizontally. The mere act of balancing the level is sufficient to bring the piston to the proper position. After setting the piston in this way, all that is required is to set the valves to open or close at that point.

Three sets of perforations are placed on the dial in as many circles, the outer one applying only to the timing of the exhaust valve, the inner to the ignition setting, and the middle one to the setting of the inlet valves. The perforations relating to the ignition system are two in number, and refer to the location of the point of maximum retard for high tension magneto and jump spark systems, respectively, while for the low tension magneto system, the hole marked zero, is employed.

By following the settings laid out by the perforations, only one method of timing is obtainable, it will be observed. This is ac-

cording to a design of the inventor's and allows for early exhaust opening and late closing both of exhaust and inlet, while for a period of about 5 degrees at the beginning of the suction stroke, both the inlet and exhaust valves are open. Out of deference to those who prefer their own settings to this, as well as to permit of comparing the adjustment of the valves in all the cylinders of a multi-cylinder motor, a second and interchangeable dial is provided which, unlike the first, is without perforations, but instead is divided into degrees on one side, and percentages of the circle on the other. By using this arrangement, it is possible to obtain any system of timing exactly as laid out in a chart.

Raising the Limit of Compression.

It has been supposed for several years that the practical limit of compression pressures for internal combustion motors of the common type was somewhere about 30 pounds per square inch. That improvements in design may ultimately raise this limit, was shown by the results of a series of experiments conducted by Professor Burstall of Birmingham University, England, who succeeded in making successful tests at more than double what is usually considered the limit of compression pressure.

Fully two years were consumed in the research of which this was the conclusion, the broad purpose of which was to discover the relation between initial compression and heat efficiency. Considerable alteration of the engine under test was one of the incidental complications to the investigation. Special ignition apparatus also was required to withstand the tendency to preignition, and many unsuccessful trials were essayed before it was found possible to run the compression above 140 pounds. When finally the motor was got into working shape it was found that it did its best work when running at 175 pounds compression. A thermal efficiency of 43 per cent. was developed under these conditions, which is as high as has yet been attained by any motor with the single exception of the Diesel machine which runs upon a specially modified cycle. The results though instructive in a general way, have no present application to automobile practice, beyond showing the existing possibilities.

Grounding the Plug Wire.

When for any reason it becomes necessary to run the motor with one or more of the spark plug terminals disconnected, care should be taken to ground them positively against the cylinders or some other metallic part of the machine. Otherwise the full voltage of the secondary current will be discharged through the infinite resistance of the air, and the chances of breaking down the insulation of the coil will be very great. Removing the plug wire altogether inflicts upon the coil affected the worst possible strain to which it can be subjected.

specifications, but rear driven. While crossing a patch of artificial mud, it was found that the front driven machine held its course every time, while the rear driven one manifested a decided tendency to swerve. When an attempt was made to alter the course of either vehicle on the greasy patch, it was found that it became more or less uncontrolable. A subsequent trial of the front driven machine made by altering the weight distribution over the front and rear axles, developed the fact that as the weight on the front wheels was proportionately diminished, the controlability of the vehicle was correspondingly decreased. The well known performance of the Christie car is an example bearing out the same theory.

The principal advantages of the electric and hydraulic systems in contradistinction to gasolene and steam, are, as he explains, that they are directly applicable to the driving wheels, as is done with the American Couple-Gear vehicles, thus concentrating the power plant and simplifying the mechanism to a most desirable extent. Naturally, such systems are not applicable to light and swiftly moving vehicles of the pleasure type, as at present constructed, though several attempts are being made abroad to introduce fore carriages in machines of the town car type.

To Avoid Misleading Ammeter Tests.

While it is an excellent plan to test ignition dry-cells frequently in order to keep track of their performance and ensure long life, it is well to make sure that the observations are made with a reliable instrument. With many of the cheaper grades of ammeter which are sold for battery testing, the tendency is for the reading to become higher than it should be after some little service has been seen, with the result that the batteries under test appear to be giving from two to four times as much current as is actually the case. This fact may account for some of the many tales which are heard of the sudden failure of batteries which up to the last have continued to give a high amperage. The test, of course, is useless unless the instrument is correct. On this account it is well to test the batteries occasionally by leading temporary wires from a switchboard instrument, which is apt to be pretty nearly standard, afterward checking the portable instrument by taking a second reading from the same batteries.

Speed Indicator in Compact Form.

A new speed indicator which has just been brought out in Eugland takes the form of a tiny magneto, mounted on the axle of the car and driven directly. The indicating device, which is merely a miniature voltmeter graduated to read in miles per hour, is carried on the dashboard, and also includes an odometer of the ordinary mechanical type. The voltmeter wires and the driving shaft of the odometer are enclosed in a single flexible casing.



WORM GEAR IN INDFPENDENT DRIVE

Practical Features of Twin Motor "Mixed"

System in New Omnibus—Simple

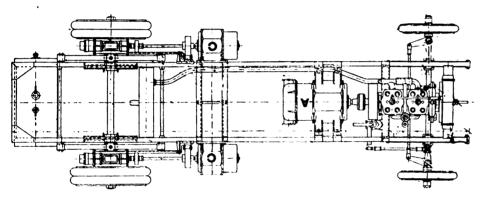
Methods of Control.

Mixed systems of auto-propulsion are multiplying with great rapidity, and it would appear that with each new comer, some commendably ingenious device is brought out. Thus, in the case of the new Hallford omnibuses, which just have made their appearance in London, the unique feature consists in the use of a special form of independent drive for each of the rear wheels. Instead of the common arrangement of the motors with their axes parallel to those of the driving wheels, they are arranged longitudinally

primarily to prevent sparking at the commutator, also is of value in that it permits the machine to pick up its load on closed circuit when starting the vehicle from rest.

The control system is based on altering the excitation of the dynamo, by passing the field current through suitable resistances. In this way no great proportion of the energy of the gasolene motor is lost in heating resistances, and the driver's mastery of the vehicle is in no way impaired. In addition to this, provision is made for operating the motors either in parallel or series. Speed control is therefore obtained in two ways, that is to say, by varying the current strength in the generator, or by accelerating the engine.

For stopping, a foot-operated electric cutout is employed, and this is so placed on the right of the foot board that in order to



of the car, bolted to the outside of the frame side members, and driving through cardan shafts and worm gearing.

The layout of the power plant and transmission is seen in the accompanying plan view, in which A, is the generator, directly connected to the gasolene engine mounted vertically at the fore part of the chassis, while C-C are the two motors, each of which drives its own wheel through a suitable cardan shaft and worm gearing. In this connection it is interesting to note that the worms instead of being mounted in fixed relation to the wheels, are carried on independent ball bearings, and transmit their power to the wheels through jaw clutches, which permit a certain amount of freedom of movement and allow the worms to seek their own alignment with the gears, irrespective of any possible distorsion of the wheels and axles, also relieving them of all shock. Just back of each motor is mounted a small band brake. The gear reduction in the worms is 12 to 1, so that the motors run as high as 1,200 revolutions per minute. Consequently the brakes, which are interconnected and balanced, are very powerful.

The gasolene engine is of conventional pattern and rated at 30 horsepower. The electric generator to which it is connected is mounted directly in the chassis frame, and is of the "interpolar" type, that is to say, it is provided with two sets of field windings, one of which is in shunt and the other in series. This arrangement, while intended

reach it the operator must remove his foot from the engine accelerator, thus slowing the generator, and reducing the voltage of the main current before circuit is broken. An interlocking device connected with the foot switch, prevents the raising of the pedal to its full height except when the controller lever is in either the forward or reverse position. In addition to this, the engine is governed automatically, to prevent racing, or throttling below a certain minimum speed. A throttle lever is mounted on the steering wheel in addition to the lever controlling the position of the rheostat, which is used in conjunction with the foot accelerator.

By virtue of the arrangement of parts employed, it is possible to gain access to any of the important organs of the transmission at any time without stripping down the chassis or running it over a pit. The motors, in particular, being mounted on the outside of the frame, are in a thoroughly accessible position, while the generator may be got at by merely raising the foot board in front of the driver's seat. Further than this, the use of independent drivers for each of the rear wheels, does away with the requirement of a mechanical differential, as is the case with any double motor electric system, but in addition to this, the manner of placing the motors, renders the rear axle essentially simple, and affords a high gear ratio with that most desirable of all features, a silent drive.

WHEN GREASE IS NOT A LUBRICANT

Resistance It Offers When Stiffened by Low Temperature—Evils that may Result Under Such a Condition.

Safe to say the average motorist has absolutely no comprehension of the amount of resistance offered by a bearing which commonly is lubricated by grease or so-called "hard oil," when the atmospheric temperature is so low as to cause the grease to stiffen perceptably. Instead of acting as a lubricant under those circumstances, the grease actually increases the natural resistance due to the load on the bearings to a degree which at times throws strains on the mechanism which are a menace.

In the case of counter shaft bearings, for instance, where the possible addition to the regular load which might be brought about in this way is comparatively slight, there is little possibility of harm from this cause. But where sliding gearsets are packed in grease, the very attempt to move one of the sliding groups in order to start the car may be sufficient to spring the connections be tween the gears and the hand lever of a poorly constructed car, causing the interlocking mechanism to prevent the clutch from being fully seated, or even preventing the gears from meshing sufficiently to secure enough tooth surface in contact to prevent stripping.

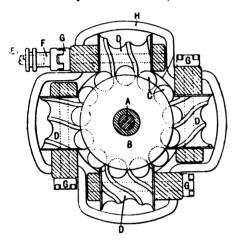
In the same way, where grease is used in bearings which are placed at some little distance from the grease cups, there is danger that cold weather may make it practically impossible to force the lubricant through to its destination, turning down the feed screw on the cups simply serving to force the grease past the plunger into the upper part of the chamber and effecting no more useful purpose. In fact, this is one of the greatest drawbacks to the use of grease in cold weather, and not even the tendency to warm the supply slightly as a result of the undue friction set up is always sufficient to ensure perfect lubrication. For generally speaking, the heat so generated is purely local and while sufficient to soften the grease in the immediate neighborhood of the bearing, has no effect on any which may be located in oil-ways or pipes distant only an inch or so away.

On this account, it is well to be particularly watchful of all parts of the machine which are dependent on grease for lubrication during the cold weather. When the machine is habitually kept in a heated room when standing idle, there is little or no danger of trouble arising on this score. But when permitted to remain in the cold for any length of time, there is a chance that abrasion may occur in the bearings, or that some of the more delicate parts may be sprung, unless care is taken in handling the machine until thoroughly warmed up.

INTERCHANGEABLE WORM DRIVE

Speed Ratio Altered by Varying Number of Threads on Spiral—Individual Clutches for Effecting Changes.

In connection with the development of the worm drive for motor vehicles, which has been in use by a few makers for several years, a number of attempts have been made to produce a method of speed changing directly adaptable to the worm, thus doing away with the usual gear box and placing the bulk of the transmission on the rear axle. Thus far, these efforts have resulted only in the production of mechanical curiosities. Recently a foreign inventor has added a new system to the list, which hard-



ly appears to be practical, though its ingenuity commends it to notice.

The plan is to employ four worms, all held constantly in mesh with the same gear wheel, the latter, instead of being of the solid type with cut teeth, carrying a series of balls embedded in its surface, which fit into the helical grooves of the worms. Naturally these are all of the same pitch, but by employing one single, one double and one triple thread, the thread angle is varied sufficiently to secure three different ratios of transmission, according to the selection of one or another of the worms as the driver. The fourth worm is single threaded, but is pitched oppositely to the other three, thus affording the reverse movement. Each worm is mounted on a short shaft and carries a jaw clutch integrally mounted with it and adapted to lock with a master clutch when thrown into the driving position.

The accompanying illustration gives a fair idea of the method of mounting and the system used in changing gear. The driven shaft, A, carries the wheel, B, with the ball teeth, C, and is surrounded by the casing, H, which carries the four worm shafts, D, with the clutches, G. The driving shaft, E, carries the clutch. F, which may be engaged with one of the clutches, G. To effect the changes of speed, the casing which is at once, gear housing and

THE MOTOR WORLD

carrier for the worms, is partially rotated about the driven shaft, so that the desired worm is brought into the upper horizontal position. When so placed, the clutch, G, may be engaged and the drive established by means of the usual master clutch.

Electric Differential in Mixed System.

Among the new machines employing the electro-mechanical transmission, of which several have been brought out within a year. the system of the Ampere car, one of the brand new French productions, should not be overlooked, because it embodies not simply a multiple adaptation of the magnetic clutch principle, but also extends the same scheme to the differential provision for the rear wheels, which is controlled not mechanically, but electrically, and in proportion to the deflection of the steering wheels. It is in no sense of the word a gearless car. since the ordinary form of transmission is employed, practically in its entirety. The novelty consists in the application of individual electro-magnetic clutches, in place of the usual sliding pinions, all gears being in continuous mesh.

Permanently attached to each driving gear in the change gear group is a magnetic disc, adjacent to which is a magnetic clutch, splined to the shaft, but free to slide upon it for a certain distance. Whenever the field of either of the magnets is excited by directing the master current through it, the effect is to lock the corresponding disc to it, much as a keeper is locked to a horseshoe magnet, thus fixing the gear to the shaft, about which it is otherwise free to revolve. In this way the changes of speed are all effected by manipulating the small switch mounted above the steering column.

The most unique provision of the system, however, is that corresponding to the differential. Each wheel is mounted loosely on the end of the solid, live rear axle, and carries a disc, similar to those employed in the gearset. A magnet, also similar to those in the gearset, is mounted on the end of the axle adjacent to the disc, and the flow of current through it is controlled by the movement of the steering wheel in such a way that whenever the front wheels are deflocted, the driving wheel which has the shorter turning radius is released, the other being held in fixed relation to the axle. In addition to this, whenever the brakes are applied, the current through the rear clutches is discontinued, and liability to skidding is therefore largely abolished.

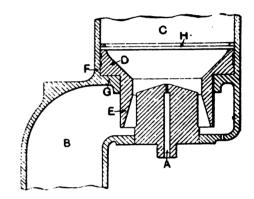
The controlling current, which here serves merely the purpose of a connecting, rather than a driving medium, it will be observed, is derived from a special form of magneto, mounted on the engine. By an ingenius disposition of the windings, two currents, at varying potentials are generated, one of which is used for igniting the gas in the cylinders, and the other in controlling the transmission. The system is the product of the Société Etablissements Ampère of Billancourt, France.

SIMPLE AUTOMATIC REGULATOR

Quality of Mixture Controlled by Differential Piston—Improvement Effected by

Change in Carburetter.

So general is the apparent tendency to increased complication both as to construction and number of parts in the matter of carburetter design, that it is really noteworthy when a fairly simple idea is fixed upon which bears the ear marks of apparent suitability for the purpose. Thus, the Jobling carburetter, which is here illustrated, contains the germ of the true automatic type in which regulation is affected by varying the quantity of air drawn over the fuel jet, a strangling or dash-pot action for preventing rapid fluctuations in the qual-



ity of the mixture, and has the further recommendation of possessing but a single moving part—itself composed of but one piece.

The arrangement in question contemplates the use of the ordinary system of float regulation and a plain jet around which the air current rises as in the simplest form of carburetter. The distinguishing feature of the jet is that its body is much larger than is ordinarily the case, the outside of the jet, together with the inside of the single sliding regulator, forming the air passage. This organ takes the form of a differential piston which is hollow. The lower extension is made not simply to reduce the area of the passage surrounding the jet, but also to partially cut off the entrance of the air to the passage. The upper portion of the valve fits the delivery passage closely and by virtue of the shoulder against which it fits, acts as a sort of suction dash pot to check its movement.

From the illustration the arrangement will be perfectly evident. A is the jet through which the fuel is drawn by the suction of the motor, which also lifts the air through the air port, B, to the reduced area, E, around the jet. The delivery port is directly above through C, while the shoulder, G, in the wall, F limits the travel of the valve, D; II, is a wire placed across the valve and used in removing it from the chamber when cleaning or repairing.

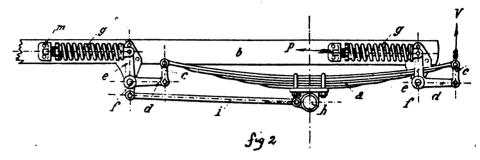
MODIFICATION OF THE SUSPENSION

Two New Systems Using Supplementary Springs—Vertical Thrust Transformed into Horizontal.

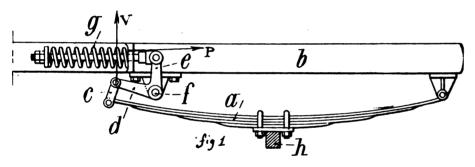
Notwithstanding the great popularity of the so-called shock absorbing devices, it is evident that the use of supplemental springs is constantly growing more pronounced. While the end sought is the same in devices of both types, the method is distinctly dissimilar. With the shock absorber, the plunging action of the springs during the period of recovery from the initial deflection is checked by direct braking action. The supplemental spring, on the other hand, because of its inherent properties, serves to interrupt the oscillation of the main springs, by interference of vibrations. There are various ways in which this object may be effected, such as the use of helical springs in conjunction with the usual elliptical members, the use of scroll-end full elliptical horizontal elastic medium, g, attached at m, to the chassis. The elastic medium may be of any sort desired, so long as its position is horizontal. In use, when the axle, h, is raised by an obstruction in the road, the main spring, a, is compressed, its extremities thereby receiving a vertical reaction, which, in the case of the bell crank,

tralizing the lifting tendency at those points. Total transformation of all vertical forces into horizontal, is absurd.

The second system, which is known as the "B. C.," is designed in accordance with practically the same principle as the Demerliac, except that the secondary springs are vertical instead of horizontal and the con-



connection at d, is transformed into a horizontal motion, absorbed and resisted by the spring, g. This thrust, being horizontal, has no appreciable effect on the occupants of the machine, according to the theory of the invention



springs, in which the members have different periods of vibration, and also certain systems of equalization by means of coupling bars, which in possible adaptation offor a very wide range of plausible practice.

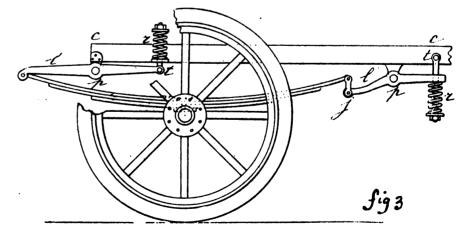
In connection with the latter principle it is instructive to consider a couple of recent French designs, which, though quite similar in spirit, yet differ in mechanism to a significant degree. The first, which is known as the Demerliac suspension is capable of two possible variations in arrangement. The principle upon which the system is based depends upon the fact that the reactions of the ordinary suspension are vertical in direction, and that however much they may be dampened or partially surpressed, they still act as vertical thrusts which appear to the passenger in the form of distinct vibrations. The object of M. L. Demerliac in designing the system under discussion was merely that of converting these oscillatory thrusts into horizontal instead of vertical impulses.

As shown in Fig. 1, the laminated spring, a, instead of being linked directly to the frame by means of the ordinary shackles, is connected to a bell crank lever, e-d, pivoted about the fixed point, f, where it is attached to the frame. The horizontal arm, d, is linked to the end of the main spring, while the vertical arm is connected to some

In Fig. 2, the same principle is shown as applied to both ends of the main spring, instead of to one end alone. Both balancing members are made to "look" in the same direction so that the resulting horizontal reactions are both toward the front of the

nection is by means of a straight lever instead of the bell-crank arrangement employed in the latter device. Each extremity of the main spring is connected to a balancer which is pivoted about a point of support on the frame. In each case the opposite end of the balancer is attached to a helical spring, mounted on a rod, which also is connected to the frame.

Thus, when the axle is raised by an obstacle in the road, the compression of the main spring produces a vertical reaction in each of the end connections, which serves to displace the balancers, 1-1, which pivot about the points, o-o, and cushion against the helical springs, r-r, which through their connection with the chassis, take up the reactions in a suitable manner. The oscillation of the body over the axle is thus divided between the main spring and the two supplementary ones, exactly as with the supplementary springs, commonly employed in this country, while the difference in time of the natural vibration of the two sets, serves to dampen automatically any ten-



vehicle. It is evident that by reversing one of the connections and adapting such an arrangement as is shown in Fig. 1, it would be possible to equalize these horizontal forces. Here the reactions on the pivot points supporting the bell crank levers on the frame would tend to counteract each other in some measure, thus partially neu-

dency to surging which may arise from the inertia of the body. The introduction of any linkage, tending to complicate the suspension, is, of course, distinctly a disadvan tage. At the same time it is questionable whether some method more or less akin to the foregoing, is not entirely justified under the circumstances.



MOTOR 'BUS BOOM SHRINKING

Unfavorable Results of Foreign Mnuicipal Experiment—Some Causes and Their Suggestions for the Future.

As an inevitable result of the tremendous boom which the motor omnibus has suffered in England during the last two or three years, more or less of a reaction is setting in, governed largely, it is safe to assume, by the rapid falling off in stock values. In some instances also, the first equipment has not been maintained properly, and has now reached a point where a complete and thorough overhauling is required, and at an expense which has not been reckoned with hitherto. In this way a number of discouraging reports are heard from time to time, which are in marked contrast to those from other quarters where the business has been managed on more conservative lines.

The municipal experiment of the city of Nottingham, is a case somewhat in point. After two years of operation of three 'buses which formed the experimental equipment, a report has recently been made which is distinctly unfavorable to the new method of traction. The vehicles have been run in a portion of the town not served by the street cars, and have not even paid expenses. The receipts per vehicle mile for the streets cars amounted to 25 cents on the average, against an average of 201/2 cents for the 'buses. The working costs of the streets cars, on the mile basis amounted to 141/2 cents, while those of the 'buses are not given in the official report. The total receipts of the experimental vehicles during the second year, were, however, \$1,263 more than the total receipts for the same period. This, of course, is construed into a complete indictment against the motor vehicle in this case, and is likely to be held up as a fair example in others where the possible adoption of the system is under discussion.

Without fuller particulars as to the exact traffic conditions in the section served by the motor vehicles, it is impossible to question the justice of the report. But it is well known that vehicle-mile and load-mile figures are not invariably as representative as they purport to be, and that the success or failure of any method of transportation in one locality, is not proof positive of its inherent qualifications. The point is that the boom period being passed in England, so far as the motor 'bus is concerned, that vehicle must now do battle to a vast amount of adverse criticism, which is not always as unbiased as it appears. Transportation interests are well grounded and slow in giving up their prerogatives. Schemes which are prey to the fluctuations of the stock market are equally apt to suffer with those fluctuations. The complaints of the noise, and speed, and skidding of the motor vehicle are as nothing compared with the apparent logic of unfavorable statistics coming from apparently disinterested sources.

An exactly similar situation is due within a year or two in this country, not with the omnibus, but with the taxicab, which just now is subject to so much inflation. It is a condition which nothing can prevent and which is practically certain to come. In its effect on the real service of the motor vehicle to the public, such a reflex of sentiment is only temporary, but at the same time, its influence on the market and the industry, even though temporary, is apt to be of some little consequence. Only one policy can be held to offset its effects, moreover, and that is one of conservatism in investment and patience in awarding judgment until such time as the boom period, or such conditions of novelty as might foster it are passed.

Municipal Motoring Minus Graft.

Patrolman Bauer, of the Roslindale substation, West Roxbury, Mass., does not fear investigation of his methods of using municipal automobiles. Patrolman Bauer employs a little runabout that has been in continuous use since 1905, and during that time it has covered 33,384 miles during its trips through Jamaica Plains and West Roxbury, the territory to which it was confined. In 1907, 9,251 miles were recorded; 11,627 miles in 1906, and 11,264 miles in 1907. During January, 1908, the odometer registered 1,242 miles. Its service has been nearly as varied as that of the policeman who acts as chauffeur. It has taken rush trips to fires, investigated police court cases, played the part of an ambulance, and given first aid to the injured by conveying them to their homes, and has even broken up street fights. During 1906 it was out 234 days. and in 1907 219 days.

Proposed Letup in Gasolene Restriction.

One of the automobile measures now before the Massachusetts legislature provides for the amendment of the law relative to the storage of explosives and inflammable fluids so as to exempt gasolene tanks in automobiles from its provisions. It would add to the law a new section, as follows:

"The provisions of this act shall not be construed to apply to the keeping or storage of gasolene in tanks or receptacles forming parts of automobiles."

This bill was introduced on petition of William A. Thibodeau and George L. Ellsworth, and is at present in the hands of the committee on legal affairs, which has given a public hearing on the matter.

Taxicabs for the National Capital.

Washington, D. C., will have a taximeter motor cab service beginning March 1st Robert A. Parke, manager of the cab department of the E. R. Thomas Motor Co. has been in Washington perfecting arrangements for the establishment of the service there. The name of the company, it is stated, will be either the Washington Taxicab Co., or the Thomas Taxicab Co.

FIGHT AGAINST THE WHEEL TAX

Chicago's New Ordinance to be Attacked as Unconstitutional—Chief Weapon a Former Court Decision.

Injunction proceedings will be instituted at once against the city of Chicago by the Chicago Motor Club to prevent the municipal authorities from carrying out the provisions of the wheel tax ordinance, passed by the city council last week. The club's attorney is preparing the papers for the fight. All the automobiling organizations of Chicago are united in contesting the new ordinance which, it is asserted, is directly contrary to decisions of the Supreme Court of Illinois.

The wheel tax ordinance passed by the Chicago council, provides that the following license fees be paid yearly by all vehicles using the streets of Chicago:

In its assault upon the constitutionality of the wheel tax ordinance the Chicago Motor Club will use as its chief weapon the decision of the State Supreme Court in the case of the City of Chicago vs. Collins, several years ago, when an attempt was made to tax bicycles. The Supreme Court ruled that the use of the streets is not a provilege of the citizen, but his alienable right, which no municipality has a right to tax.

In view of its bearing on the present case the following excerpt from the Supreme Court's decision in the Collins case is not untimely:

"The right of the public to use the streets is the right to use them for pur-poses of travel in the recognized methods in which the public highways of the State are used. Any method of travel may be adopted by individual members of the public which is an ordinary method of locomotion, or even an extraordinary method, if it is not, or itself, calculated to prevent reasonably safe use of the streets others. If a right exists in a city council to impose a license fee, by way of tax, upon every person using wheeled vehicles thereon, it may, in like manner, impose such license fee for such use of the streets in every other manner of locomotion or travel and reach the man on horseback or the pedestrian walking along the same.
... Anything which cannot be enjoyed without legal authority would be a mere privilege, which is generally evidenced by a license. The use of the public streets of a city is not a privilege but a right. A license, therefore, implying a privilege, can-not possibly exist with reference to something which is right, free and open to all as in the right of a citizen to ride and drive over the streets of the city without charge, and without toll, provided he does so in a reasonable manner.

The Week's Patents.

872,808. Shock Absorbing Device for Vehicles. Claud H. Foster, Cleveland, Ohio. Filed Dec. 14, 1905. Serial No. 291,704.

1. The combination, with the body and axle of a vehicle, of a dashpot comprising a cylinder supported by the axle and a piston therein, a rod for said piston having at its upper end a bracket, a pin carried by said bracket and a plate or member carried by said body and provided with a slot for the reception of said pin, said slot being elongated longitudinally of the vehicle, substantially as specified.

872,836. Vehicle Wheel. Tod J. Mell, Youngstown, Ohio, assignor to The Republis Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed May 17, 1906. Serial No. 317,369.

1. In a circumferentially divided wheel rim, the combination with separable sections, of a spring locking ring having cooperating inclined faces for drawing and securing said sections together, substantially as described.

872,860. Vehicle Tire. William C. Taylor, Paris, France, assignor of one-half to Clarence G. Taylor, Washington, D. C. Filed Feb. 20, 1907. Serial No. 358,431.

1. In combination with a rim; a plate carried thereby, said plate being provided with numerous perforations throughout its length and breadth; a pneumatic tire mounted upon the rim over said perforate plate; and means for admitting air to the opposite side of the plate.

872,877. Vehicle. Zephaniah E. Williamson, Sheffield, Ill. Filed May 9, 1907. Serial No. 372,693.

A vehicle of the class described having a frame projecting from the front end of its body and provided with a transversely disposed guide-way, a tongue pivotally connected to an axle of the vehicle and bearing and disposed to travel in said guideway, a steering shaft mounted in the body of the vehicle, having a steering wheel at its upper end and a sprocket wheel at its lower end, direction sprocket wheels mounted in the said frame at points at opposite sides thereof, and a sprocket chain engaging and connecting the sprocket wheels, the sprocket wheel at the lower end of the steering shaft and also connected to the tongue to move the latter in the guide way, for the purpose set forth.

872,881. Drive Mechanism for Motor Vehicles. Adam Ziska, Jr., Chicago. Ill., assignor to Rockford Automobile & Engine Co.. Rockford, Ill. Filed Nov. 24, 1906. Serial No. 344,936.

1. In a motor vehicle, the combination of a motor operated drive wheel having a friction face, a pulley having a peripheral friction surface, a shaft on which the pulley is mounted operatively connected to the pulley, means for adjusting the shaft to vary the line of engagement of the friction surfaces of the drive wheel and pulley and means for adjusting the pulley to engage the face of the drive wheel at different points along said line to vary the speed of the pulley.

872,952. Variable Speed and Reversing Gear. Franz Markgraf, New York, N. Y. Original application filed Feb. 11, 1903, Serial No. 142,974. Divided and this application filed Dec. 15, 1904. Serial No. 236,950.

1. In a variable speed mechanism, in combination, a shaft, a plurality of gears of

varying diameters fixed thereon, a second shaft, a plurality of gears slidably mounted thereon and adapted to mesh with said first mentioned gears, means adapted positively to throw said second mentioned gears into mesh with said first mentioned gears and to throw some of the gears out of mesh without breaking connection between all the gears, a lever controlling said means, and cushioning means interposed between said throwing means and said lever.

872,999. Power Transmitting Mechanism. Gittfried Malburg, Cleveland, Ohio, assignor of three-fourths to A. A. Maresh, R. J. MacKenzie, Theo Hanks, Frank McHale, and Fred Matthews, Cleveland, Ohio. Filed Dec. 24, 1904. Serial No. 238,204.

Power transmitting mechanism comprising the combination of a frame, an engine mounted on said frame, a gear wheel se-cured on the engine shaft, a shaft arranged at a right angle to the engine shaft, a gear wheel mounted on said last mentioned shaft and arranged to mesh with the gear wheel on the engine shaft, two wheels rigidly secured on said last mentioned shaft, boxes rotatably mounted on said wheels, levers fulcrumed in said frame and having their ends extending into and arranged to slide freely in the respective boxes, sleeves arranged on the opposite ends of said levers, means for sliding said sleeves in and out on same, means for locking said sleeves in their adjusted positions, a driving shaft, drums mounted on said driving shaft, a cable connecting each drum with one of said levers so that the movement of said levers in one direction will cause a rotary movement of operating clutches arranged to lock said drums to said driving shaft when said drums are rotated by the movements of said levers, and springs for rotating said drums in the opposite direction to that in which they were rotated by said levers, substantially as described and for the purpose set forth.

873,016. Pneumatic and Solid Tire for Vehicle Wheels. James Burnham, London, England. Filed Jan. 28, 1907. Serial No. 354,563.

1. The combination of a wheel, a band on the exterior thereof having side flanges of unequal height, one of said flanges being notched and the other slotted, of a tire rim carrying a tire and provided with internal projections of substantially the same size as said notches, and wedges fitting in said notches, substantially as described.

873,047. Automobile Wind Shield. Stephen D. Hunter, Philadelphia, Pa. Filed July 11, 1907. Serial No. 383.272.

1. A wind shield for automobiles comprising a two part frame and two pairs of tubes between which the frames are respectively supported, plugs secured within the tubes of the lower frame and provided with threaded sockets having conical outer seats, and pins extending through the tubes of the upper frame, said pins having contracted threaded ends and tapered shoulders at the junction of their bodies and said contracted threaded ends, said contracted threaded ends and tapered shoulders being adapted to respectively engage the threaded orifices and conical seats in said plugs substantially as described.

873,092. Coupling Rod for the Axles of Automobiles. Theodore Rommel, Neuilly-sur-Seine, France. Filed Sept. 6, 1906. Serial No. 333,458.

1. The combination with a vehicle frame and wheel axle of a coupling or tension rod adjustable as to length and having a non-

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

W ANTED—A man calling on the automobile manufacturers, to sell on commission the best article of its kind made. To the right party—one who can show results, an interesting proposition will be made. All replies held in strict confidence. Address P. G., care Motor World Pub. Co., Box 649, N. Y.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

Continental Ready-Flated Tires.

they reduce tire expenses.

CONTINENTAL CAOUTCHOUC COMPANY
43 Warren Street, New York City.
"Keep your eye on Continentals"

Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order.

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

HAYNES

Always Has A Perfect Score

MAYNES AUTOMOBILE COMPANY
Members A. L. A. M. KOKOMO, IND.

Oldest Automobile Manufacturers in America New York, 1715 Broadway—Chicago, 1702 Michigan Av



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.,
New York.

displacable connection at one end to said frame, and a spring connection between the other end of said rod and the wheel axle aforesaid substantially as described.

873,102. Clutch. William W. Sly. Cleveland, Ohio. Filed June 21, 1907. Serial No. 380,070.

1. The combination of a shaft, a rotative member thereon having an annular flange, a clutch lever supported on the shaft and having a pivot head with a slot therein through which the flange extends, and means to operate the lever to bind the flange in the slot.

One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being ob-That was ourselves. But, unfortunately, we sold to the jobber also - and the jobber cut the price.

Then there was fun in the camp. That hurt us - it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that

hurt the consumer, the dealer and ourselves. For the jobber knows

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co. 108 Wheeler Ave., Beloft, Wis.

Hotel Pontchartrain

Detroit's New Hotel



Automobile Headquarters

Woolley & Chittenden, Managers

Triumph Grease, What Is It?

II is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. ¶We do not imitate any one, nor 'follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. ¶It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. ¶A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewthrough using it. ¶It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. ¶Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind. Nothing can win approval without merit



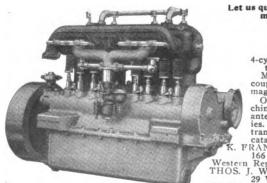
Splitdorf Ignition

Has Attained National Repute **Because of Unquestioned Merit**

The confidence in SPLITDORF Ignition that has made this business the greatest of its kind is rooted in Splitdorf quality.

C. F. SPLITDORF Walton Ave. & 138th St. **NEW YORK**

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908

THREE SIZES

THREE SIZES

4½ in. x 4½ in.

4½ in. x 5 in.

5 in. x 5 in.

5 in. x 5 in.

4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.

Our new factory and machinery enable us to guarantee quality and deliveries. Also clutches and transmissions. Send for catalogue.

ransmissions. Send for catalogue.
K. FRANKLIN PETERSON. 166 Lake St., Chicago, Ill. Western Representative
THOS. J. WETZEL. 29 W. 42d St., New York. Eastern Representative.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.

MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Loganspert, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

"RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



KINWOOD AUTOMOBILE PARTS.

ONE QUALITY—THE BEST.

OUR LEADERS:

Kinwood Perfection Radiators

Kinwood Mechanicai Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc. Large facilities and dependable deliveries.

K. FRANKLIN PETERSEN, 166 Lake St., Chicago, Western Representative. THOMAS J. WETZEL,
I Warron St., New York,
Eastern Representative.

THE KINSEY MFG. CO., Dayton, Ohlo.



A NEW SENSATION

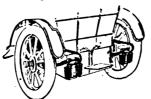
Equip your car with

Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis



Warning Harroun Auto Bumper THE HARROUN BUMPER PATENT has been allowed, and as soon as it can be issued we will bring suit against all USERS of Bumpers infringing on and not manufactured under the HARROUN license. R. W. HARROUN, Patentee. THE TURNER BRASS WORKS, SOLE LICENSEES, U. S. A. SYCAMORE, ILL.

AUTOMOBILE BODIES



TWO FACTORIES

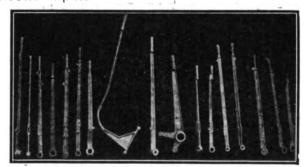
Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.

PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.

IF YOU ARE INTERESTED IN MOTORCYCLES

The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

\$2.00 Per Year

Specimen Copies

FIRESTONE TIRE & RUBBER CO., Akron, Chio

FRANCE ENGLAND ITALY AMERICA

MICHELIN TIRE CO.,

Militowa, N. J.

Policy Apperson

"QUALITY NOT QUANTITY" If you want a good car write us APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



TRUFFAULT-HARTFORD SHOCK ABSORBER

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO., E. V. Hartford, Pres.

66 Vestry St., New York

Logan 1908 Model S Three Ton Truck

A truck equipped with a four cylinder water cooled 40 H. P. motor, built to give service month after month and year after year, and representing the best thought of the oldest and largest plant in America devoted to the manufacture of commercial motor cars. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE OHIO.

REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

EISEMANN HIGH-TENSION MAGNETOS

LAVALETTE & CO.

112 West 424 Street,

NRW YORK

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St. Syracuse, N. Y.



For catalogues, address
THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MFRS. TOPEKA, KANSAS

CHANDLER CO.

Name Plates and Stampings SPRINGFIELD, MASS.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, "07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St.

CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.

FOBES AUTO SUPPLY CO., Portland, Oregon.

FOBES AUTO SUPPLY CO., Seattle, Washington.

WAITE AUTO SUPPLY CO., Providence. R. I.

CIMIOTTI GARAGE

Now York City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try us.

Tel. 2686 River.



BRISCOE RADIATORS

Honeycomb, Flat Tube, Round Tube, Staggered Tube, Film Tube; horizontal or vertical flow; with or without casing; with or without pump. Fenders, Tanks, Hoods also made. Send for catelogs.

catalog.
Old Radiators Repaired. Send to nearest factory. BRISCOE MFG. CO

NEWARK, N. J. DETROIT, MICH.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed One Year

WITHERRE IGNITER CO..

541 West 434 St., New York



The Baldwin Chain Company - MAKE

Automobile Che Spreekets, Spur and Bevel Gears.

Baidwin Chain & Mfg. Co., Werester, Mass., U.S.A.

THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO.

INDIANAPOLIS, IND.

Digitized by Google



\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette
W. H. KIBLINGER COMPANY
Box No. 280 AUBURN, IND.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO.
Pottstown, Pa.

STANDARD ROLLER BEARING COMPANY PHILADTLPHIA

Manufacturers of Steel, Brass and Bronze Balls, Ball Bearings, Roller Bearings and Automobile Axles. Write for new automobile catalogue with full particulars of

THE STANDARD TRANSMISSION AXLE.



STA-RITE PLUCS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE and see for yourself. Double or single Porcelain,—Mica or Magneto,—all kinds. All Good Dealers.

THE R. E. HARDY CO., 85 Watts St., New York City



Send for Booklet
Index Speed Indicator Co.
Minneapolis, Minn.



SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies SPRINGFIELD METAL BODY CO...

366 Birnie Ave., Springfield, Mass.



A.O. SMITH CO.

Makers of

High-Grade Axles



Prossed Steel Frames
Steering Columns Transmissions

Steel Stampings of Ali Kinds

Send Prints for Estimates

243 Clinton Street.

MILWAUKEE, WIS.

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

No Sand Too Deep—No Hill Too Steep 2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO..

Jackson, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.

J. M. QUINBY & CO.

Carriage Builders.

HEWARK, M. J.

Motor Car Accessories

Spark Plugs, Cable, Switches, Lampa, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 254 Jesseson Ave., Detroit, Mich.

INSURE YOUR MOTOR

Against wear and carbon troubles by using



"INVADER" OIL

TWO GRADES-LIGHT AND MEDIUM HEAVY

YOU NAME THE CAR—WE'LL, NAME THE GRADE

NVADER SEMI-FLUID
COMPOUND
thickened oil for transmissions

INVADER LUBRICATING COMPOUND
For Compression Cups

CHAS. F. KELLOM & CO.

128 Arch Street, PHILADELPHIA

RANKLIN MOTOR CARS LIGHT-WEIGHT, MIGH-POWER

\$250 "SUCCESS"

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Co., Inc. S31 Be Ballvere Ave., St. Louis, Me

McCORD Lubricators — radiators

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY
NEW YORK OFFICE—34 Broad Street.
Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

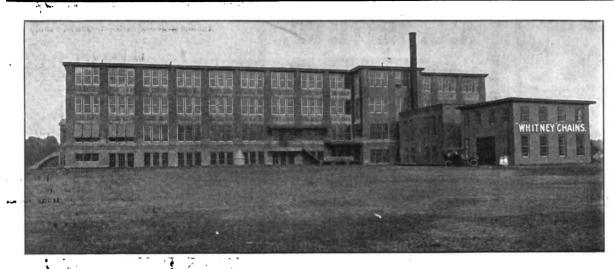
Enclosed find \$2.00 for which enter my subscription to The Dotor Whorld

for one year, commencing with the issue of

Address

Name_

Digitized by Google



We are now well settled in our

New Factory and

READY TO SHOW RESULTS

Prompt Delivery and Constant Improvement in Quality

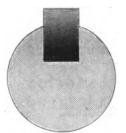
In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

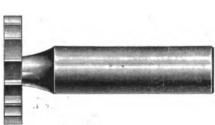
We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.



"WHITNEY" MACHINE KEYS and KEY SEAT CUTTERS
(For the Woodruft Patent System of Keying)



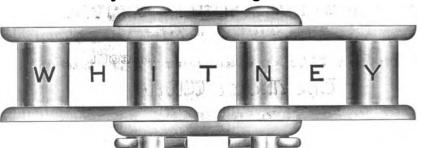






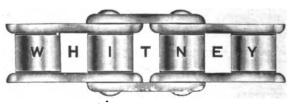
We carry 95 regular Sizes of keys and cutters in stock for immediate delivery

"Whitney" Detachable Bushing Chain-Patented



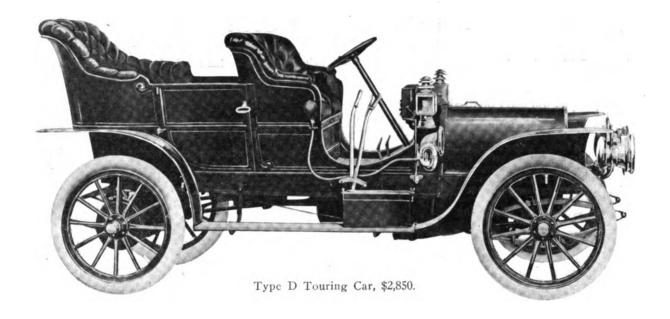
Bushing Chains are like Roller Chains-Without Rolls

Roller Chain



The Whitney Mfg. Co. Hartford, Conn.

FRANKLIN



You want your motor-car for keeps.

You want it to go on giving good service year after year. You don't want to find yourself next year with an over-weighted expense-breeding relic on your hands.

You want an automobile so well built that a season's use will only make it run smoother and easier; so far advanced that time will only bring other makes nearer to it in design; so graceful an modish that in spite of changing fads it will still be smart and in good form.

Over 5,000 Franklins are in active use—many of them 5 years old. The first Franklin ever made is still giving good service. How many 5-year-old automobiles of other makes do you see in use to-day?

Demonstrations by appointment. Any Franklin dealer will gladly show you. An hour's ride will tell you more than we could describe in 100 pages.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

Member Association Licensed Automobile Manufacturers.

EVELAND-CANTON

SPRINGS

Vanadium Anti-Fatigue

alloy steel gives the maximum of elasticity, tensile strength and stands up under continuous shocks and stress reversals far in excess of anything yet discovered. Where drastic conditions are encountered, there Vanadium is at its

Automobile Springs

that will not permanently set, that are resilient and will carry on overload without breakage are not easy to find. We make them. The fitting is done by a patented high-pressure roller used exclusively by us, and every spring is carefully tested in powerful machines before leaving the factory. We believe we can be of assistance to every automobile builder in working out the "spring problem."

Our services for the asking.

Cleveland-Canton Spring Co. 1429 Dueber Avenue CANTON. OHIO

A Car On Crutches!

A Car limping there—and limping back, has but one thing the matter with it-a lame, crippled Ignition System.

The Battery Witherbee **Means Perfect Ignition**

Means new life to your car; means less cost for "up-keep." there and back without the limp. Equip your Car with the Witherbee and throw away your crutches.

The consistent performance of the battery Witherbee, has so standardized this product that it is included as part equipment on the greater majority of motor cars manufactured in this factured in this country.

In writing Department 20 for battery catalogue please request Wico Spark plug literature and mention Motor World.

WITHERBEE IGNITER COMPANY

THREE FACTORIES.

Chicago, 1429 Michigan Ave. Detroit, 220 Jefferson Ave. New York, 541 West 43d St. Baltimore Office: 510 Continental Trust Building.

Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. The do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

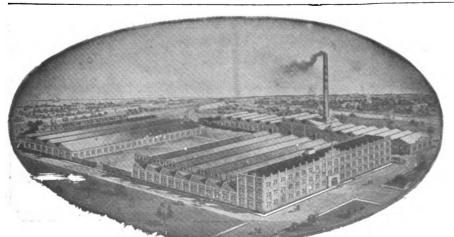
The Perfection Grease Company, South Bend, Ind.

AUTOMOBILE BODIES



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished Racino, Wis. RACINE NOVELTY MFG. COMPANY,



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park CLEVELAND, OHIO, U.S.A.

Digitized by Google



\$3,000 to \$5,000 for an Automobile? You Don't Get Your Money's Worth

You don't because to-day most automobile values bear the same relation to automobile prices that bicycle values and prices

bore to each other twelve years ago.

You paid \$125 for a good wheel then. To-day you can buy a

better one for 60 per cent. less.

Before you pay \$3,000 to \$5,000 for an automobile, find out what sort of a car the Mitchell is at \$2,000.

Don't take it for granted that \$2,000 can't buy as good auto-

mobile value.

Prove that it can. Put higher prices on the defensive. Do it this way-

Try the Mitchell—any agent anywhere will be glad to "show you" a combination of style, finish, construction and performance in the Mitchell new models, the superior of which hasn't been "shown" in any car made to-day regardless of price.

He'll send a car around any time you say and show you a

silent argument that will instantly appeal to your business judg-

ment and convince you—a silent argument the equal of which no salesman ever will be capable.

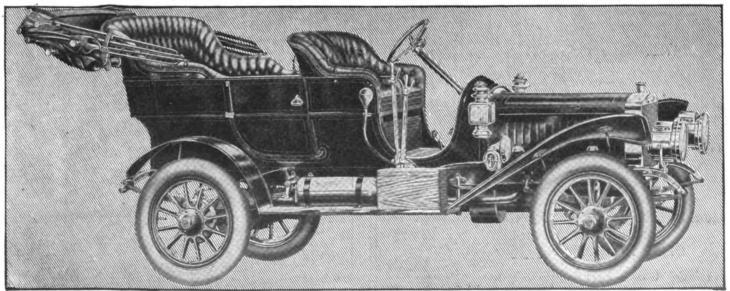
Isn't saving \$1,000 or \$3,000 on an automobile which proves itself right worth considering, Mr. Business Man?

You simply telephone any Mitchell agent that you are interested (no obligation on your part) and want a demonstration. Think it over, Mr. Business Man. Do you know a single, good, business-like reason why you should pay more than \$2,000 for an automobile? Prove that there isn't any by writing us or the nearest agent for names of many satisfied users of the Mitchell who have driven their cars thousands of miles over all kinds of roads and hills, and have encountered every known kinds of roads and hills, and have encountered every known road test that makes or breaks a car. Let them tell you facts in their every-day experience which proves the Mitchell to be the most economical car to keep as well as to buy.

Write for Catalog No. 18.

MITCHELL MOTOR CAR CO., 279 Mitchell Street, RACINE, WIS.

Member American Motor Car Manufacturers' Association.



One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us—it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out—that

hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

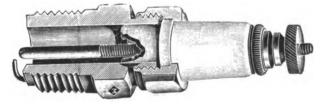
THIS STAND IS POSITIVE.

Warner Instrument Co.
125 Wheeler Ave., Beloft, Wis.



The Largest Automobile Supply House in America

The Miller Porcelain Spark Plug



There has been a constant demand for a first-class porcelain plug and we have arranged to manufacture this plug in large quantities and in this way we have reduced the cost of manufacturing the plug, and we offer one of the best spark plugs on the market at a low price. The material and workmanship are the finest on the market and are guaranteed. The list price is \$1.00 each.

Our catalog-the largest of its kind, mailed on request

CHAS. E. MILLER

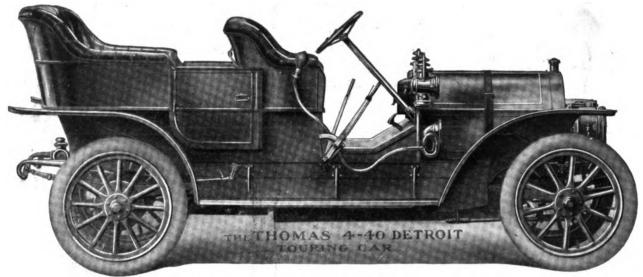
Manufacturer, Jobber, Exporter and Importer HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 1829 Buclid Ave. Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 227 1/2-229 Jefferson Av. Buffalo, N. Y., 824 Main St. THE BEST WAY
TO FIND A GOOD
THING IS TO LOOK
FOR IT X WE HAVE
AFIND IN THE
AURORA MOTOR WORKS
AURORA - ILL.

THOMAS 1908

A complete line of Motor Cars of the highest quality possible in Design, Material and Workmanship. They will do what you wish your car could do



PRICE, \$2,750

Thomas 4-20 Towncar

The original Towncar, designed for City and Suburban use exclusively. Beautiful bodies, quiet operation; low cost of maintenance. The Society Car.

Thomas 4-40 Detroit

Best of all shaft-drive cars. In power, speed, hill-climbing, and reliability the Thomas Detroit leads the five passenger class.

Thomas 4-60 Flyer

Winner of hundreds of contests of speed, hill-climbing, reliability, and endurance. Has more records than any American car. This year improved, enlarged, and refined.

Thomas 6-70 Special

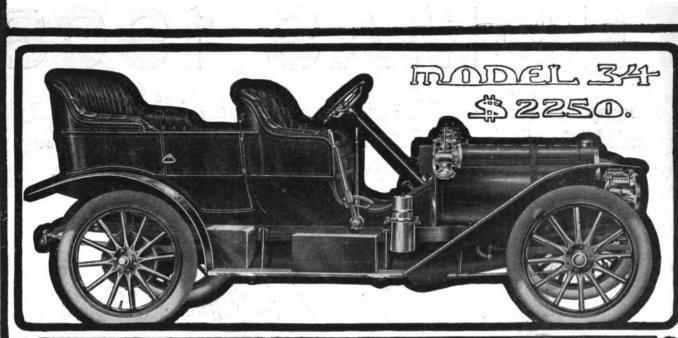
The six-cylinder model of the Thomas Flyer, built by America's pioneer six-cylinder builders. The greatest car in America in speed, size, reliability and refinement.

Thomas Cars Succeed

E. R. THOMAS MOTOR COMPANY

Member A. L. A. M.

Buffalo.





The Car of Steady Service

As a matter of business judgment examine the mechanical features of this car, such as offset crank shaft, straight line drive, direct from transmission gear to rear axle without an intervening joint, ball or roller bearings throughout the transmitting system, and powerful axle construction and other important details.

Then compare this car at \$2,250 with any other car at any price, and be guided by the keen consideration that you would give any other investment of equal moment. It is quality that counts and we offer all the practical value obtainable at any price.

Let us show you; it may save you hundreds of dollars both in first investment and cost of maintenance.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wis.

Chicago

Branches and Distributing Agencies Philadelphia Milwaukee Boston Representatives in all leading cities.

San Francisco

Digitized by Google

Volume XVII.

New York, U. S. A., Thursday, February 20, 1908.

No. 21

BUDLONG TO GO WITH PACKARD

Resignation as General Manager of the A.

L. A. M. a Trade Surprise—His Successor not yet Named.

The fact that Milton J. Budlong, general manager of the Association of Licensed Automobile Manufacturers, has resigned that office to accept the assistant general management of the Packard Motor Car Co., Detroit, was made known early this week.

As it was known only to a limited few that Mr. Budlong even contemplated such a move, the news proved in the nature of a trade sensation, although a visit he made last week to Detroit furnished an inkling of it. The exact date when Budlong will take up his new duties is not fixed, as he will remain with the A. L. A. M. until his successor is chosen and well established in office. No one yet has been suggested to succeed him.

Although his change will excite general surprise, it is known that the Packard principals were negotiating with Budlong soon after his return from Europe last Fall, and that when he accepted the management of the A. L. A. M. in November, it was due to urgent solicitation and that to his acceptance were attached conditions that he should remain long enough to effect certain internal reforms and thereafter be free to go elsewhere, his personal inclinations being for effort in the manufacturing field in which he had spent the best years of his life. He since has had at least three unusually handsome proposals of the sort made to him and having accomplished the ends he sought to serve for the A. L. A. M., he has accepted the Packard proposal, which will make him the right hand man of Henry B. Joy, the managing head of the Packard company, who seeks to lighten his

Previous to his engagement with the Association of Licensed Automobile Manufac-

turers, Mr. Budlong was president of the Electric Vehicle Co., and as the representative of that company he served as a member of the A. L. A. M. executive committee and president of the National Association of Automobile Manufacturers.

Credit Association in Annual Session.

At the annual meeting of the Automobile Trade Credit Association, held at the offices of its secretary and attorney, Franz Neilson, 80 Wall street, New York, all of the old officers were re-elected, as follows: President, W. B. Lasher, Weed Chain Tire Grip Co.; vice-president, Carl Kaufman; treasurer, M. J. Martin, George Haws Co.; secretary, Franz Neilson. These gentlemen, with E. S. Fretz, Light Mfg. & Foundry Co.; George L. Holmes, Jones Speedometer Co.; F. S. Wilson, Trenton Rubber Mfg. Co., and H. B. Mirick, National Electric Supply Co., constitute the board of directors. During last year it was reported that the association had been able to collect 75 per cent. of the old and doubtful accounts of its members. The total number of accounts handled was 863, of which 805 were collected, the total amount being \$75,341, of which \$56,801 was collected.

Witherbee to Establish Branch Houses.

The Witherbee Igniter Co., manufactur ers of Witherbee batteries and Wico specialties, have just established a branch office at 720 Main street, Buffalo, N. Y. It will be under the management of James Barkley. A. J. Fisk, general manager of the Witherbee company, is now on an extended trip through the West, during which arrangements will be made for the establishment of a complete chain of branches.

Overland Issues More Stock.

The Overland Automobile Co., of Indianapolis, which emerged from its embarrassment by a semi-reorganization with J. N. Willys, its former Eastern agent, as president, has certified to an issue of \$25,000 preferred stock. P. D. Stubbs appears as secretary of the company.

ELECTRIC VEHICLE AT STANDSTILL

No One Found Willing to Undertake Reorganization—Factory Closed, with no Prospect of Early Opening.

All prospects of an early reorganization of the Electric Vehicle Co., Hartford, Conn., have vanished. It is understood that efforts were made to induce two well known men to undertake the task, but in each instance the men refused and the last prospect of any further steps in that direction were dissipated this week when J. B. Entz, vice-president and chief engineer of the company, and E. C. Steinmetz, superintendent of the factory, were released. A few clerks and repairmen are still at work, but to all practical intents and purposes the plant is closed, and it is expected that the branch stores of the company also will be discontinued. In Hartford it is freely reported that there are small prospects of the stagnation being overcome until after the presidential election next Fall. .

Henry W. Nuckols, one of the receivers of the company, stated that the practical suspension of operations is due to the improbability of immediate reorganization coupled with the fact that now there is no money coming in.

The receivers' report, filed in court, shows that at the end of January they had \$21, 951.44 in hand. Their expenditures during the month were \$16,226.50. They collected \$38,177.94 during January and paid out \$16, 226.50. They had \$10,619 in hand on January 1, 1908.

The temporary receivers for the Electric Vehicle Co. were appointed on December 10, for four months. While this term expires on April 10, Mr. Nuckols does not believe that the court will at that time require a forced sale of the property, but will continue the receivership another four months.

There is a bare possibility, Mr. Nuckols

said, that the bondholders might bid for the property if it is put up at auction sale, but he added that he had had no such assurances. He did not believe, however, that the court would order a sale under present financial conditions, as the property would have to go at a great sacrifice, with a corresponding loss to the creditors.

Franklin Re-elects Old Officials.

Indications of improvement in business conditions is shown in the reports presented at the recent annual meeting of the H. H. Franklin Mfg. Co., Syracuse. In speaking of the year's business, H. H. Franklin, president of the company, said that the company sold its first car in June, 1902, and the total business for that year amounted to \$122,000, while in 1907 the sales ran to nearly \$4,000,000. In spite of the financial stringency orders kept up very well during November and December of last year. From January 1st to the 15th business was dull, but during the week of January 15 to January,21, 29 per cent. more orders were received than during the previous two weeks.

The following directors were elected by the stockholders to succeed themselves: H. H. Franklin, A. T. Brown, W. C. Lipe, E. H. Dann, G. H. Stilwell, John Wilkinson, and F. A. Barton. After the stockholders meeting the directors re-elected the following officers: President, H. H. Franklin; vice-president, G. H. Stilwell; secretary, F. A. Barton; treasurer, H. B. Webb. In the evening the stockholders of the company were entertained by Mr. Franklin at the Century Club.

Foreign Makers Turning to Air Ships.

From motor cars to flying machines is a far cry, it would appear, but it is not too far for some of the French automobile makers who are beginning to feel the effects of the popular revulsion from the craze for high priced machines, which has been the leading feature of the Gallic market for several years. Leon Bollée, one of the oldest motor car builders in the country, is reported to be engaged in the construction of a flying machine at Le Mans, and the Clement-Bayard Co., are reputed to be engaged in a similar undertaking at the instigation of a Russian enthusiast. It will be remembered that these firms stepped into the automobile business from the ranks of the bicycle industry at the time when trade depression was affecting the Continental cycle market.

Can't Sue Avery's Customers.

The United States Court of Appeals, at Chicago, has entered a decree sustaining the order of the lower court, which restrains the Commercial Acetylene Co. of New York from bringing suits against agents, customers, or users of automobile lighting equipment sold by the Avery Portable Lighting Co. of Milwaukee. The Commercial company claims that the Avery gas tank infringe their rights,

THE MOTOR WORLD

In the Retail World.

The Hibbard Automobile Co., Milwaukee, Wis., has dissolved.

Monterey, Cal., is to have a garage. Arthur Winston has purchased a lot on Main street, opposite Rodrick Park, and will erect a large reinforced concrete garage.

E. S. White and Linn B. De Bell have formed a copartnership and will open a garage in Adrian, Mich. The property at Church and Maumee streets has been purchased for the purpose.

The Wheeling Automobile Co., which has conducted a garage at Sixteenth and Eoff streets, Wheeling, W. Va., has been petitioned into bankruptcy. W. E. Weiss and others are the petitioners.

York—Nebraska, not Pennsylvania—now feels entitled to take rank with the "metropolusses" of the world. The York Automobile Co., the first garage in town, opened in the new Farmers' Exchange building last week.

Defective electric wires caused a lively blaze for a time in the three-story wooden garage of Walter O. Faulkner, Lynn, Mass., on Tuesday last, 11th inst. The only damage was to machinery, amounting to a little more than \$1,000.

The Owensboro Automobile Co., which conducted a garage and repair shop at Owensboro, Ky., has gone out of business. Concurrently, a number of people are looking for W. R. Williams, the proprietor, who is said to have suddenly departed for Texas.

Howard Morley and Albert Marksheffel have organized the Colorado Automobile & Supply Co., and have opened a garage at 8-10 East Bijou street, Colorado Springs, Col. The company will handle the Ford car, and has announced that it will organize a supply club by which members may secure supplies at actual cost.

The Week's Corporations.

Ossining, N. Y.—Ossining Garage Co., under New York laws, with \$5,000 capital. Corporators—G. Howard Wallace, Samuel J. McCord, and Thomas E. Wilson, Peekskill, N. Y.

Chicago, Ill.—Co-operative Engineering Works, under Illinois laws, with \$10,000 capital, to manufacture automobiles and supplies. Corporators—F. W. Ritchie, J. Smalley and G. E. Schmidt.

New York City, N. Y.—Stepney Spare Wheel Agency, under New York laws, with \$4,000 capital. Corporators—John C. Riley, Chicago; Stephen A. McMahon, Belleclaire Hotel, and L. Walter Lissberger, 135 East Ninety-second street, New York City.

Kittery, Mc.—Ball Bearing Tire Co., under Maine laws, with \$7,000 capital; to manufacture and deal in automobile tires. Corporators—Edward N. Cook, Providence, R. I., president; Ira F. Peck, Auburn, R. I., treasurer.

Yonkers, N. Y .-- Rose & Thomson, under

New York laws, with \$10,000 capital, to carry on automobile business and conduct a garage. Corporators—Arthur S. Thomson, New York City, N. Y.; Herbert Rose and Louis F. Marran, Yonkers, N. Y.

Larchmont, N. Y.—Holbrook-Singer Co., under New York laws, with \$15,000 capital; to manufacture automobiles, etc. Corporators—Henry F. Holbrook, 58 West Firtyninth street, New York City; Charles A. Singer, Jr., and David J. Levett, Larchmont, N. Y.

Jury Gives Verdict Against Vanderbilt.

Francois Richard, a Frenchman, who built a racing automobile for Alfred Gwynne Vanderbilt, the only fault of which was that it would not run, secured a verdict of \$1,250 against his former employer, by a jury in the Supreme Court, New York City, this week. Richard had sued for \$5,000, which he claimed was the balance due from Vanderbilt for constructing the vehicle. It was brought out in the suit that Vanderbilt had employed Richard to build a car that would break all existing speed records, agreeing to pay him a salary of \$5,000 a year, in addition to the cost of materials employed in the construction of the car.

The car, rated at 200 horsepower, was built and taken to the Florida beach carnival in 1906, but it did not break any records; in fact, it could not be persuaded to move under its own power for any distance. Some of Richard's expense items were rather high and Mr. Vanderbilt would not pay them, when Richard sued for \$5,000, the unpaid balance of \$19,000, the cost of the machine. In court it was brought out that Richard charged \$1,300 for a crank shaft that cost him \$600, and that in his bill was an item of \$1,400 for expenses at Florida, during the racing week. Richard explained that he met a "very many Frenchmen in Florida." The jury was locked up many hours before returning a sealed verdict in favor of the plaintiff for \$1,250.

Breaks Away from Horsepower Rating.

While automobile manufacturers have discussed the subject, it has remained for a maker of motorcycles to break away from the slavish, elastic and too often meaningless term "horsepower." The makers in question, the Hendee Mfg. Co., Springfield, Mass., who produce the famous Indian motorcycles, have announced that henceforth they will employ piston displacement instead of horsepower in rating of their engines, and emphasize their statement by sc designating the power of their several models in their 1908 catalog.

Rushmore Obtains Another Injunction.

The Rushmore Dynamo Works have obtained a preliminary injunction, restraining the Motor Car Equipment Co., New York, from using the words "Flare front" or the name Rushmore, and from the manufacture and sale of lamps in imitation of the Rushmore product.



ODD SETTLEMENT OF SHOW SNARL

Trouble Caused by San Francisco Women's Project is Eased—"Ins" are In; "Outs"

Must Stay Out.

Although the Automobile Dealers' Association of California at its last meeting refused to sanction the proposed show of the California Woman's Automobile Club, as it was expected would be the case, the show promoting ladies are not the least bit worried and will conduct the exhibition as planned. It is advertised to take place in the Coliseum, during the week March 8 to 8.

As told in last week's Motor World, the trade association, by a majority vote, sometime ago decided that it would not be to the general interests of the dealers to hold a show this year. The dealers that did think it to their interests to hold a show were considerably put out by the decision of the association, and when the feminine motorists came forward with a project to hold a show under the auspices of their club, the idea was hailed with delight and many of the dealers promised to support it

When it was announced that the women would apply to the trade association for a sanction for their show and that the question would come up for discussion and action at the last meeting it was predicted there would be "tall doings." Unusual would better describe the action taken.

After a great deal of discussion and lively argument it was decided to not grant the sanction to the California Woman's Automobile Club. This action was followed by the adoption of a rule which considers all shows not sanctioned by the association as outlaw events. At first the rule, as proposed, was most drastic. It would have prohibited those who took part in such events from taking part in all future contests and shows, and for a time it looked as though there would be a split in the association. The rules were amended, however, to allow those dealers who already had taken space in the proposed woman's show to take part in that one only and to "be good" in future. It also prevents any more dealers signing to exhibit at the show, giving power to the directors of the trade association to penalize them according to their discretion. The situation is very much muddled. Those dealers who did not purchase space to exhibit now are barred, while those who ignored the dealers' association's previous action and said that they would show whether a sanction was given or not, have been granted immunity, and will be able to display cars at the show. There are those who rightly think that it is a poor rule that won't work both ways.

The California Woman's Automobile Club issued a prospectus this week which indicates that most of the spaces have been taken. The cars which will be shown are the Dragon, National, Jackson, Renault, Aerocar, Stearns, Tourist, Locomobile, Matheson, Winton, Elmore, Stevens-Duryea, Woods, Maxwell, Acme, Overland, Marion, Glide, Gale, Auburn, Chadwick, and Frayer-Miller.

THE MOTOR WORLD

Why Budlong is not Wholly Happy.

Milton J. Budlong is one of the incorporators of the Leakless Motor Tube Co. which was this week incorporated under New York laws, with \$60,000 capital. Budlong was not aware of the honor that had been thrust upon him until friends in formed him of the fact, and then he was not wholly happy. It appears that when he was abroad last Fall and before he became general manager of the Association of Licensed Automobile Manufacturers, an English acquaintance informed him of his intention of forming an American company to market the "Sure Seal Compound" on this side of the pond and asked if Budlong would permit the use of his name in for-Budlong proved warding the project. agreeable, but that he would figure as one of the organizers of the company never entered his mind, hence his present discomfiture, which is made keener because his British friend who came to America, has just sailed for home, thus partly closing Budlong's relief valve. Edmund S. Hop kins and Dr. Ottey Miller are named as the other corporators of the Leakless company. Budlong, however, does not consider him self a corporator, as he signed no papers and had nothing whatever to do with the matter.

Wagner Leaves the "Motor Age."

As a result of its acquirement of the Chicago Motor Age by the owners of the New York Automobile. Fred J. Wagner, the general advertising representative of the Chicago publication, has been released. Wagner is one of the best known men in his field, his connection with the Motor Age dating back nearly 20 years and from the period when that publication was first The Bearings and later the Cycle Age.

Mitchell Rental Service in New York.

The Mitchell Motor Car Co. of New York has instituted a rental department. The Mitchell touring cars which will be rendered available for the service will be rented, however, only with one of the Mitchell company's regular drivers. The rates that will apply are as follows: Per hour, \$5; six consecutive hours, \$25; one week day (10 hours), \$35; one week (six days), \$150; one month, \$500.

Shift of Fisk Branch Managers.

W. J. Lamb, who several months ago was transferred from management of the Fisk Rubber Co.'s Detroit store to the corresponding position in the New York branch, has returned to the Detroit post. The vacancy in New York has been filled by the transferral of J. B. Kavanaugh,

REORGANIZATION OF THE ROYAL

Receivers Recommend Capitalization of Its Indebtedness—Fate of Company to be Decided To-day.

If the recommendations of the committee of three, appointed by the receivers, are carried out, the Royal Motor Car Co., Cleveland, Ohio, will be reorganized by the cred itors' acceptance of stock in payment of their claims. The committee, was composed of Charles E. Adams, vice-president Cleveland Hardware Co.; S. F. Haserot, president The Haserot Canneries Co., and formerly chairman of the board of directors of the Royal Motor Car Co., and F. A. Scott, secretary and treasurer of the Superior Savings and Trust Co., which latter institution is the receiver for the Royal company.

Previously, the estate had been subject to appraisal as a going concern, and was found to be worth \$397,833.67, the most valuable items being as follows: Cars at factory and in agents' hands, \$89,828.40, raw material and parts, \$98,762.48, machinery, \$91,784.35, equity in buildings, etc., \$55.725.82. The schedule in bankruptcy had placed the total assets at \$443,959.59, and the liabilities at \$510,832.12. Of the latter amount \$261,092.65 was represented by notes payable, and \$164,744.68 by accounts payable.

Of the 400 creditors, the claims of 235 are for sums of \$100 or less, aggregating \$6,000, which the receivers' committee advises be paid in cash, and that the property then be sold to "a new corporation composed of the creditors" by the issuance to them of preferred stock, the entire control of the company to remain with these creditors until 50 per cent. of the proposed preferred stock shall have been retired.

The committee lays stress on the fact that the appraisal is based on the value of the property as a going concern and points out that the real estate and plant are held under a land contract from a syndicate on which there already is a default. The syndicate is therefore in position to foreclose at any time. The equity in this land contract that would be lost to the creditors through foreclosure proceedings, is \$80.725.82.

The committee also points out that included in the item of \$98,762.48 of automobile parts and raw material scheduled by the appraisers, is an allowance of \$10,000 for parts for Model "M" car, which parts cost the company approximately \$67,000; but as the car has never been completed and marketed, the parts will become absolutely valueless unless put into the form of a finished product.

The fate of the company probably will be decided at a meeting of the creditors which is being held in Cleveland to-day.



DRIVE A WILLIAMER

And see the Country as you have never seen it before and as you cannot see it in any other way

WRITE FOR LITERATURE AND THE

THE WHITE COMPANY

CLEVELAND, OHIO



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Caechs, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

2. Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should
Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, FEBRUARY 20, 1908

The Press and the Price-Cutters.

If legitimate dealers were asked what one factor serves most seriously to disturb the retail trade, there is small doubt that the great majority of them would specify pricecutting. When prices are cut, all values are unsettled, and every dealer is placed on the defensive and his sales are rendered much more difficult. It is bad enough when prices are cut secretly, but it is when the cut prices are published and thus spread broadcast that real and widespread damage is done.

As a rule the man who makes a business of cutting prices is a cunning individual who has no real or lasting regard for or interest in the trade. He will forsake it the moment he has squeezed the orange dry. As a general thing, the goods he announces in spreadeagle fashion are doubtful goods—goods that are ante-dated or "off color" in some way; frequently they represent purchases of bankrupt stocks, which implies

that replacements of parts will be impossible. Occasionally, such merchants lay hands on goods of unquestionable repute and condition and it is then that they shriek loudest and advertise boldest. Generally speaking, such goods are secured from a disgruntled agent who, because of a dispute with the manufacturer, hopes to "get even" and to injure the latter by unsettling his values. Several instances of this sort recently have occurred, and though the number of the articles obtained was small, the price-cutter advertised in a manner that made it appear as if his stock was unlimited.

With few exceptions, the publications in which such advertisements have appeared are the very ones that express an almost holy love for the automobile industry. The manufacturer and the dealer who are courted assiduously, pay their good money and if they receive a little gratuitous "softsoap" in the reading columns, they overlook entirely the spreadeagle advertisement of the price-cutter which, in another column, or the same column, does damage to them and which minimizes or nullifies their announcements. This sort of thing is bad enough on the part of the daily press, but when the automobile publications themselves open their pages to the price-cutter, it is time for protest. The damage done by a questionable advertisement in a daily paper is largely localized. When it appears in a trade paper it is spread over a great expanse of country. The seed of trouble is planted and values unsettled in hundreds of places. Hundreds of dealers are affected.

It is not to call attention to the fact that the' Motor World never has solicited a cut-price advertisement, or permitted one to appear in its columns, but because other papers which are prone to call attention to their virtues, have done and are doing that very thing-some of them even permitting the advertisements to appear on their "bargain price" pages, while their regular and legitimate patrons are obliged to pay full rates. It would seem that ordinary regard for the health of the industry and fair dealing toward the manufacturers and dealers who enable them to exist would inspire the eradication of disturbing factors-and there is no question regarding the disturbance caused by the publication of cut prices. The industry has a right to expect that its interests will be conserved and protected by its own organs. It is a fair assertion also that when manufacturers have bargains to

dispose of, they should give their own agents or other legitimate customers a chance to purchase and dispose of them in the regular channels before having resort to professional price-cutters, whose practices always are injurious.

Horsepower vs. Piston Displacement.

What a motorcycle manufacturer has done, some automobile manufacturer should have courage enough to do, i. e., break away from the slavish, elastic and unmeaning, if time honored, term "horse-power."

Fame awaits the man who places the rating of his engines on a definite and unfanciful basis; and piston displacement is a basis of the sort. It affords no room for guess or subterfuge and aside from affording purchasers known values and unfailing comparisons, it is a basis that places designers on their mettle and holds them up to their work. When of two engines having the same displacement one proves of superior power, the evidence is irrefutable that there is something lacking somewhere in the men or the mechanical makeup responsible for the other engine.

Piston displacement several times has been discussed by automobile manufacturers. It is now time that one of them passed the talking point.

Fuel Problem and Its Influence.

How much of popular misconception is covered by the prevalent term gasolene, is not generally appreciated. How much remains to be learned of the properties of the ideal fuel is even less readily comprehensible. As set forth in another column, it appears that changes in market conditions, governed chiefly by the rapid and lusty growth of the motor industry, have so altered the status of the ordinary fuel of commerce as to render the former test by specific gravity of no avail. The fact that this is but an outward indication of a vastly more significant change which is destined to come is not as easy to appreciate.

The importance of the fuel problem is generally admitted. Sooner or later it is likely that gasolene as such will become too expensive to be of practical value to the ordinary user. A new standard fuel will have to be adopted, and its adoption will involve certain changes in engine design which though not material from the ordinary point of view, yet must have great effect upon the question of efficiency, or,

roughly, upon the amount of plant required to produce a given unit of power. Not until a fuel can be chosen which may be regarded as reasonably permanent will it be possible to fix upon standards of design as absolute and exact. Meanwhile much remains to be accomplished in the study of conditions governing the actual behavior of the fuel in an intimate way.

Concerning the Glass Front.

Affording protection from the elements to the driver of a car is a problem, the solution of which is as difficult as it is important. Though the glass front does afford protection from the wind, it is not entirely practical for the purpose of keeping out the rain or snow, for while it will serve that end, it also offers a surface to which moisture adheres with the consequent result that it becomes translucent instead of remaining transparent. This, of course, prevents the closest observation of traffic conditions, so essential to the careful operation of a car through crowded streets where distances must be actually figured by inches and allowances made in time to prevent accidents.

In fair weather the glass front, as now generally constructed, offers an ideal protection from the wind. The earlier types of this had a serious defect in that they were constructed for use on limousine bodies, with a wood panel 3 or 4 inches wide, and when in place in the frame or the car offered an obstruction to the vision in the form of a solid piece of frame work 6 or 7 inches in width. This obstruction shut off a wide angle of the road and ve hicles within that field could not be seen unless the driver kept moving his head and body from side to side, which was inconvenient and sufficiently objectionable to be considered a strong argument against the use of the glass front as then arranged.

Experience quickly showed that this objection must be overcome. As a result the wood frame gave way to a small brass rod and as this offered no visual obstruction it has come to be generally adopted and with entirely satisfactory results so far as the subject of glass as a wind shield is concerned.

While it is essential to the comfort of the occupants of the front seats that they should have protection from the snow and rain, and while it is desirable that the dashboard accessories should be kept dry, it is vastly more important that a driver

should have an unobstructed view of the roadway and its surroundings, a more comprehensive view than can be obtained through moisture covered glass. The solution is not easy, but it may be that this can best be obtained by a slight change in the design of the car body, in the case of limousines, or in the top, when one has in mind the touring car. The necessity of driving with the view unobstructed by trans lucent glass would be done away with if the glass came only so high as to be a little below the level of the eyes, and if this arrangement was supplemented by the overhead protection, either standing or cape top, having arranged on it a sort of a visor or peak which projected from the top outward and down to a point where its lowest extremity would be slightly above the level of the eyes and some distance in advance of the glass, an adequate protection would be afforded from wind and wet and nothing would be introduced between the road and the eves.

To those who find that glass is undesirable, because of a possibility of accident where it may be broken and personal injuries be sustained by coming in contact with the jagged edges, this idea of the visor and, shall we say, "half front," can be further carried out by substituting a wood panel for the glass, as either the one or the other serves to protect and the position of either is such that it is looked over, instead of through.

While practically every into and road house of any pretensions is striving for the patronage of the automobilists, there is one phase of the situation which is practically overlooked and that is provision of suitable accommodations for the chauffeurs. Thu fact that the drivers are employes instead of principals, is neither reason or excuse for treating them as the menials of the establishment in which they may seek re freshment, and as, in most places, the food served them is charged for at the same price as that served to "milady" in the dining room, they are justified in expecting and demanding that surroundings and attention be given them to the end that they may have their meals, for which they pay, served in a place apart from "kitchen help."

A sub-committee of the A. A. A. racing board now is engaged in revising and other wise overhauling the rules. If the committee decides to continue the stultifying

COMING EVENTS

February 21-29, Newark, N. J.—New Jersey Automobile and Motor Club's and New Jersey Automobile Trade Association's annual show.

February 22, Houston, Tex.—Houston Automobile Club's race meet at Harrisburg

February 22, Boston, Mass.—Bay State Automobile Association's 150 miles endurance run to Providence, Worcester and return.

February 24-29, Lincoln, Neb.—Dealers show in the Auditorium.

February 24-29, Portland, Me.—Annual show in the Auditorium.

February 25, Brooklyn, N. Y.—Long Island Automobile Club's 242 miles economy run to Montauk Point and return.

March 2-7, Ormond, Fla.—Annual beach carnival, under auspices Automobile Club of America.

March 28, San Francisco, Cal.—California Woman's Automobile Club's show in Coliseum.

March 7-14, Boston, Mass—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

March 9.14, Buffaio, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

March 18-25, Rochester, N. Y.—Rochester Automobile Club's show in new Convention hall.

March 15-April 1, Omaha, Neb.—Omaha Automobile Dealers' Association's annual show in the Auditorium.

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

and inconsistent rule whereby an amateur may compete for cash or against professionals and yet remain an amateur, it is hoped that an explanatory chart or diagram. will be permitted to accompany the rule in order that the manner in which the reversal of the world's understanding of amateurism was accomplished may be made plain. It will be a good idea also to include in a footnote, the reasons why, simply because they are engaged in the trade, Messrs. Henderson, Clifton and Briscoe, the heads of the three trade associations, for instance, must line up in the professional class as side partners of Barney Oldfield, "Red" Flan agan, "Micky" O'Toole, and the rest of the cash-chasing "sportsmen."

MANY CARS STAGED AT CLEVELAND

Annual Show the Best the City has Seen—
The Decorative Scheme a Dream in
White and Gold.

White and gold, always a striking combination rich in harmony, forms the basic color scheme of the Cleveland show, which is "holding the boards" in Central Armory this week. Judicious distribution of more than 7,500 incandescent bulbs heightens the artistic effect, and added to the whole, the restful effect of uniform signs make the present show the "prettiest ever" in Cleveland, or, at least, such is the locally expressed opinion.

The doors were thrown open on Monday night, and the show will continue throughout the week. The Cleveland show is, perhaps, one of the most important of the many numerous local exhibitions. At the present show no less than 68 exhibits, of which 38 are accessories, are displayed. The 29 agencies and branch houses are showing 39 different makes of cars, a striking illustration of the extent of the automobile trade in Cleveland. The exhibitors are as follows:

H. S. Moore, Stoddard-Dayton; Chisholm-Phillips Auto Co., Stevens-Duryea; Elmore Motor Car Co., Elmore; The White Co., White; Peerless Motor Car Co., Peerless; Rauch & Lang Carriage Co., R & L electric; Garford Motor Car Co., Garford; Price Bros. Carriage Co., Baker; R. H. Magoon Motor Car Co., Chadwick, Jewel and De Luxe; Hall Bros., Cartercar; Gaeth Auto Co., Gaeth; Ohio Motor Car Co., Stearns, Cadillac, Columbia; Metropolitan Motor Car Co., Pierce; Winton Motor Carriage Co., Winton; Standard Automobile Co., Packard and Buick; Oldsmobile Co., Oldsmobile; Woods Motor Vehicle Co., Woods, Leonard Motor Co., Jackson; Byrider Electric Auto Co., Byrider; Oakland Motor Car Co., Oakland: Brush Runabout Co., Brush: Wentworth Motor Car Co., Mora and Ford; C. M. Cachat & Co., Wayne; Reese Motor Car Co., Columbus, Royal and Corbin; George S. Patterson, Reo and Premier; T. C. Whitcomb Auto Co., Rambler; Studebaker Automobile Co., Studebaker; Auto Shop Co., Thomas and Franklin; Cuyahoga Motor Car Co., National.

Fisk Rubber Co., Standard Welding Co., Collister & Sayle, Veeder Mfg. Co., George A. Rutherford Co., Charles E. Miller, S. F. Bowser & Co., Inc., Diamond Rubber Co., B. F. Goodrich Co., Goodyear Tire & Rubber Co., American Ball Bearing Co., J. P. Davies & Co., National Carbon Co., Echo Horn Co., Auto & Supply Co., Cleveland Tanning Co., N. Y. & N. J. Lubricant Co., Austro-American Separator Co., Hartford Suspension Co., Columbia Refining Co., Perfection Spring Co., Gabriel Horn Mfg. Co., L. J. Mueller, Howe Scale Co., Jones

Speedometer Co., Ohio Rubber Co., Simpson & Gray, Warner Instrument Co., Continental Agency Co., Gerro Machine & Foundry Co., William Taylor & Co., Non Explosive Safety Naptha Retainer Co., Sprague Umbrella Co., Crawford & Soper, K. & W. Ignition Co., Westinghouse Electric & Mfg. Co.

THE MOTOR WORLD

Pope Receivers Report a Busy Month.

According to the report of the receivers, filed in the court, the cash receipts of the Pope Mfg. Co.'s Hartford factory during January amounted to \$141,382.66, while the months disbursements totaled \$129,409.91. Including \$11,284.31 carried over from December, the cash balance in Hartford banks is \$23,257.06.

The chief sources of receipts were from collection of account and notes receivable \$12,920.99, receipts from sales \$123,868.10, and from deposits by customers on orders for automobiles \$2,425. The cash disbursements were as follows: Refund of deposits received on miscellaneous undelivered orders, \$144.51; receivers' expenses and payments for purchases, \$126,248.33; premium on receivers' bond, \$200; traveling and special advances, \$825; advances for pay rolls and expenses and payments on accounts to receivers in Massachusetts, Maryland, New Jersey, Illinois, Missouri, New York, Pope Motor Car Co., \$1,992.07.

Accrued liabilities of receiver for materials, supplies and miscellaneous expenses \$36,636.89; for pay rolls, factory and office, \$7,680.15; total, \$44,317.04.

Balances due receivers of Pope Mfg. Co. and Pope Motor Car Co. in other districts, \$14,720.95.

Accounts receivable from sales of receivers, December 31, 1907, per last report, \$97,709.77; sales by receiver for month of January, 1908, \$129,409.19; total, \$227,418.96, less cash collections for month of January, \$123,868.10, and deposits credited to accounts receivable, cash discounts and miscellaneous contra accounts (\$9,483.38) \$133.351.48, leaves total \$94,067.48.

Balances due from receivers of Pope Mfg. Co. and Pope Motor Car Co. in other districts for transfer of merchandise and supplies and advances for expenses, \$6,126.29.

Australia a Promising Market.

Australia is likely to furnish a good market for American automobiles, if the trade is properly handled from now on, and efforts made to supply a product in which reliability in operation is a prominent feature, according to Harry R. Burrill, special agent of the Department of Commerce and Labor, who has made an extended investigation of foreign trade conditions. Contrary to what might be expected he says that "there is no prejudice observable in favor of England because she is the mother country, and products from her factories must compare favorably in cost with those of competing nations or she will lose the trade."

Their Frequency Prompts Chicago Dealers
to Limit Their Entries—Members of
Motor Club Take Offense.

CALLING A HALT ON CONTESTS

Believing that a multiplicity of automobile contests is too great a drain upon the resources and time of the average dealer, the Chicago Automobile Trade Association has decided that it will call a halt by simply withholding entries until all conditions are found to be more favorable. Members of the Chicago Motor Club, which has taken the initiative in promoting contests in the Windy City for the past two years, think the action of the dealers is a direct slap at them because of the differences which grew out of the 600 miles endurance run held just before the Chicago show.

Thomas Hay, manager of the Ford branch in Chicago, caused the resolution to be brought before the notice of the dealers when at the last meeting he suggested that, before the dealers enter any more contests, they withhold their entries until a special committee of the Chicago Automobile Trade Association shall have reported as to the advisability of entering such proposed contest. If the conditions of the contest and the entry fee, besides the feasibility of it, appeal to the dealers then they will enter, with the provision, however, that the club promoting such contest shall report to the association upon the financial results after it is held, a proceeding that doubtless will be balked at by those individuals or organizations promoting automobile contests.

According to Windy City reports automobile contests are becoming too numerous for the dealers, and this was their chief argument in support of the Hay resolution. Two or three interesting, sensible contests during the season are stimulating to the trade, they aver, but numerous contests are too great a drain upon the dealers in return from the benefits they receive from such contests.

The action of the trade association has provoked considerable discussion and comment in Chicago. The dealers say that in passing the resolution they are looking to their own interests, and that if they did not take action of the sort it would not be long before they would have to give up selling cars and take to competing in contests all the time. On the other hand, some of those interested in the Chicago Motor Club think that the resolution was directed straight at them on account of the late endurance run, at the conclusion of which the technical committee split hairs in an effort to arrive at the winner, when nearly a dozen cars finished with perfect scores, and all but one were finally ruled out because of some minor technicalities that had no bearing upon the enduring qualities of the cars affected.



RACING RULES TO BE REVISED

Special Committee Appointed by the A. A. A. Racing Board—Action Taken on Wilkes-Barre Prize Hold-up.

Besides the appointment of a special committee to revise the racing rules, and a no tification to the Wilkes Barre Automobile Club to deliver a prize which it has thus far failed to do, nothing else of importance was transacted at the first meeting of the new racing board of the American Automobile Association, held in New York City Saturday last, 15th inst.

Chairman Jefferson DeMont Thompson presided at the meeting, which was attended by eight of the other twenty-nine members, those present being A. R. Pardington, Brooklyn; Charles J. Swain, Philadelphia, A. L. Riker, Bridgeport; A. B. Lambert, St. Louis; Alfred Reeves, A. G. Batchelder and S. A. Miles, New York City, and Louis R. Speare, Boston.

The board sent word to the Wilkes-Barre Automobile Club, of Wilkes-Barre, Pa., that unless it sent to Walter White, of Cleveland, within thirty days, the prize in the free-for-all event at its hill climbing contest held on May 30th last, the club would be suspended from all sanction privileges until the prize was delivered. This action was in the nature of upholding a decision of the 1907 racing board, which had decided that the Wilkes-Barre club had no right to exclude White from the free-for-all after it had accepted his entry for the event.

Considerable time was spent in discussing the racing rules both at the regular morning session and at the supplementary afternoon session. Chairman Thompson, A. L. Riker, Alfred Reeves and S. A. Miles were appointed a special committee to revise the racing rules.

This special committee met on Tuesday, this week, and worked all day without completing their labors. Another meeting was called for the following day, following which it is expected that the new racing rules will be ready to be made public.

Although no official announcement has has yet been issued, Frank B. Hower, president of the Automobile Club of Buffalo and chairman of the touring board of the American Automobile Association, who is in New York City at the present time, is said to have stated that the annual Glidden tour will this year start from Buffalo, during the week beginning July 6. The Buffalo organization has made an appropriation to care for a two days' good roads convention which will be held in Buffalo probably on July 6 and 7. If these dates finally are decided upon it is probable that the annual Glidden tour will leave from that city upon the day following the convention. The exact route of the tour has not been decided but will probably lead to Pittsburg, Philadelphia, New York, New Haven, Boston and to the White Mountains. The rules for this year's tours are now being drafted.

Wilkes-Barre to Repeat Its Climb.

Although it has not yet delivered the prize in the free-for-all event in its hill climb last Decoration Day to Walter C. White, whose protest that he was entitled to the prize, for although he had been barred from the event, his car made the fastest time of the meet, was upheld, it is evident that the Wilkes-Barre (Pa.) Automobile Club intends to do so. This supposition is based on the fact that the Pennsylvania club this week announced that it would repeat the annual climb on May 30th, this year, which it cannot do if the prize is not delivered within thirty days, according to a decision of the racing board of the American Automobile Association. The announcement that the Wilkes-Barre Automobile Club will repeat the climb was made at the annual meeting, when the fol lowing new officers were elected: President. George F. Lee; vice-president, Lyman H. Howe; secretary, Dr. E. C. Wagner; treasurer, Peter A. Meixell; executive boara member, W. E. Steelman.

For the Federal Registration Bill.

Thursday, March 12, has been set as the date for the hearing on the federal registration bill, designated as "House Bill 428," which the American Automobile Association has succeeded in having introduced at the present sesion of Congress. The Judiciary committee of the House, to whom the bill was referred, will listen to arguments upon it, the hearing beginning at 10:30 a. m., of the date stated. Preliminary to this hearing a conference of the delegates of the various clubs and associations will be held at the New Willard hotel, in Washington, at 8:30 p. m., March 11th, and every club and affiliation of the American Automobile Association is being importuned to be represented by delegates on the dates mentioned. On Thursday evening the Automobile Club of Washington will informally entertain the visiting delegates at their club house. That the bill stands an excellent chance of passing both the House and the Senate is the belief of Hon. R. C. Moon, who is on the Judiciary committee,

American Entry for Grand Prix.

America will be represented in the famous Grand Prix race of the Automobile Club of France, which is to take place over the Dieppe circuit early in July, the date having not been definitely fixed. Just before the entries closed on Saturday last, E. R. Thomas cabled the entry of a Thomas car, to be driven by Montague Roberts. According to report the car which Roberts will drive in the French race will not be a racing car, but a model of the stock car he is to drive in the Briarcliff trophy race, if the latter event takes place. It is stated that Roberts will sail for Europe early in April.

FLORIDA SAND FEST A CERTAINTY Official Announcement Settles Doubts

Official Announcement Settles Doubts— Chairman Morrell Claims 28 Entries, but Names only Twelve.

The Florida beach carnival will take place during the week of March 2 to 7, despite reports that its fate was uncertain. All doubts about holding the annual sandfest were set at rest Monday when the contest committee of the Automobile Club of America made the definite statement that the meet would take place during the first week of March as advertised.

R. Lee Morrell, chairman of the contest committee, said that so many conflicting rumors have been in circulation that many dealers and manufacturers have refrained from entering cars, and in order to give them a chance, the date of closing the entries has been postponed until February 29th. It will be remembered that Morrell some time ago postponed the closing of entries for the proposed Briarcliff trophy race for much the same reason.

It also was announced that a special compartment club car for the accommodation of contestants and members of the club, will leave New York City on Saturday, 28th. It will be due in Ormond at 11.57 p. m. Sunday.

- Although Mr. Morrell stated that he had received "no less than twenty-eight entries," only twelve were made public, as follows:

Maurice G. Bernin, 60 Renault; Emman uel Cedrino. 60 Fiat; E. B. Blakeley, 130 Christie; H. B. Shefts. 120 Hotchkiss; John B. Ryall, 120 Woolsey; R. W. Buckley, 110 B. L. M. or Fiat; R. G. Kelsey, 50 Haynes; W. Gould Brokaw, 50 Christie; E. B. Blakeley, 30 Allen-Kingston; James Loughlin, 3d, 30 Cleveland; John J. Ryan, 90 Stearns, and P. W. Strong, 60 Welch.

In the 228 miles event for the Automobile Club of America's cup, the Renault, Christie, Fiat, B. L. M., Haynes and Woolsey cars have been entered. The same cars, with the exception of the Haynes will take part in the 100 miles race. The entries for the stock car race are a Welch, Haynes, Christie and Allen-Kingston. All the high powered cars will try for records.

As an extra feature, three events for motorcycles have been carded, at one, five and ten miles. It is stated that ten entries have been received from the Indian, Curtiss, M-M, and Peugeot representatives.

Averages 83 Miles per Hour.

Charles Jarrott has set up another staggering record on the Brooklands motor track in England. On February 5th he covered 50 miles in 36.05 76-100, an average of 83 miles per hour. The former record was 37.45 9-10. Jarrott had intended to try for the hour record, but a punctured tire stopped him.



LONG WINTER TEST ON HIGH GEAR

Counselman Driving Over 3,000 Miles of Snow—Not Even the Reverse Speed Available for Hills.

Sleigh riding is out of date, snow riding in an automobile is nothing new, but when such latter ride is attempted with all the gears but the high removed the performwinter, with all the gears but the high removed from the car. In the "Snow Bird" there absolutely is no low speed, intermediate or reverse, the latter having been removed so that it would not be possible to back the car up hills, a resort, that has been tried, it is claimed, where only the low and intermediate gears have been removed.

The start was made early this month from Detroit. Counselman was in the driver's seat and he will take the car to Toconsin, then backtracking to Chicago, and around the lake front to Grand Rapids, from where it will return to Detroit.

Testing Automobile as Dispatch Bearer.

In an attempt to prove the value of the automobile in carrying dispatches between army posts, John Holm and William Walls, two crack drivers of the Studebaker Automobile Co., started from New York City, Tuesday, 18th inst., bound for Fort Leaven-



PICTURESQUE SCENE ON THE ROUTE OF THE "SNOW BIRD"

ance smacks of the unusual. Such is the trip that has been undertaken by a Thomas Detroit car, which appropriately has been dubbed the "Snow Bird."

The "Snow Bird" left Detroit in charge of Lee Counselman, sales manager of the Thomas-Detroit Co., and is zig-zagging around the country wherever snow may be found. It is planned to cover 3,000 miles on the high speed before the mid-winter trip ends.

Long distance runs on one gear have been made before, but this is the first time a journey of the sort has been attempted in midledo, where it will be turned over to C. B Hills, who is connected with the engineering department. When Counselman left Detroit a severe blizzard was in progress, with a foot of snow on the ground, and the temperature bordering uncomfortably close to zero. Before the unique test shall have ended it is expected the car will have buffetted snow banks in five States, passing through Toledo, Marion, Columbus, Springfield, Dayton Cincinnati and Hamilton, in Ohio; Richmond, Indianapolis, Kokomo, and Logansport in Indiana; Chicago and other cities in Illinois, Milwaukee in Wis-

worth, Kan. They will visit all the army posts between this city and Fort Leavenworth, carrying a letter from Major-General Frederick Dent Grant, stationed an Governor's Island, N. Y., which is to be "vised" at each post. A 30 horsepower Studebaker runabout is being used for the purpose. Holm and Walls propose to follow the same route as that taken by the New York-Paris "racers." including the cities of Albany, Utica, Syracuse, Rochester, Buffalo, Erie, Cleveland, Toledo, South Bend, and Chicago, to Kansas City and Fort Leavenworth.



A NEW YORK-PARIS "RACER" QUITS

Covered 96 Miles in Six Days—Another "Racer" Towed by Horses—Snow Shoveling Still Continues.

Approximately one-twenty-fifth of the distance the cars competing in the overland trip from New York to Paris will have to cover if they get there, has been traversed by the leading car-the only American car in the so-called "race." Montague Roberts, driving the Thomas car, reached Toledo at 9.35 p. m. Tuesday, having covered 785 miles. At that time the DeDion car, in charge of Bourcier St. Chaffray, had reached Fremont, 756 miles, the Zust, driven by Sirtori, arriving at Cleveland, 667 miles, at the same time the De Dion pulled into Fremont for dinner. The Prothos, with Ernst Maas at the wheel, was then at Erie, Pa., 556 miles, and the heavy Motobloc, in charge of Charles Godard, had gotten to Buffalo, a distance of 471 miles. The Sizaire-Naudin, the other contestant which started from New York on Wednesday last, 19th inst., is out of the contest. It succeeded in reaching Red Hook, N. Y., 96 miles from the start. If they reach Paris the remaining cars will have covered about 20.000 miles.

That all the cars have been having trouble there is no doubt and also that the contest has developed into a snow-shoveling match, as the Motor World predicted, there is no contradiction. Heavy snow storms were encountered through New York State, and as a result all the cars were much behind schedule.

On the second day out from New York only two of the cars reached Fonda, N. Y., before nightfall. They were the Thomas and the Zust, the De Dion stopping at Amsterdam, 186 miles, while the Prothos and Motobloc got as far as Albany and Hudson, respectively The poor little one-lunger—the Sizaire-Naudin—was laid up at Montrose, 40 miles, with a broken differential.

Friday, the 14th, saw three of the cars reach Canastota, N. Y., 275 miles, within a few minutes of each other. The Prothos got as far as Utica, 148 miles, and the Motobloc remained in Albany all night. The Sizaire-Naudin, which had been repaired, made four miles that day, stopping at Peekskill. The three leaders—the Thomas, Zust and De Dion—took turns at leading during the following day and rolled into Geneva, 352 miles, together before supper time. Both the Motobloc and the Nandin experienced mechanical troubles.

Naturally there was a great demonstration when the Thomas reached Buffalo, its home town, in front of the others Sunday, 16th inst. An escorting party of Buffalo automobilists met Roberts several miles from the city, and all speed limits were forgotten in the run to the center of Buffalo The Thomas reached that city two hours in advance of the De Dion, while the Zust was laid up some hours at Rochester with a disabled gear. The Prothos and Motobloc were some distance behind, while the little Naudin, was put out for good at Rea Hook, N. Y., 96 miles from New York City. An amusing incident happened at Buffalo, which shows that the Frenchmen mean business, and will not forget it for a moment even to enjoy a good meal.

E. R. Thomas had planned to give the competitors a banquet and it was so arranged. St. Chaffrey, the generalissimo of the run, suddenly slipped away unknown to the others and was on the road to Erie, Pa., before Roberts, who in the meantime had sent his car to the factory to be overhauled, heard of it. There was nothing to do but to follow, and the Thomas was hastily gotten into commission, and Roberts started in pursuit. The wily Frenchman was overtaken at Erie, where he stopped to spend the night. The crew of the Zust car, although hampered by lots of tire trouble, resolutely kept going and reached Ripley, 543 miles, before darkness set in.

That the Italians mean to take no rest until they overhaul the leading Thomas and De Dion cars was evidenced on Tuesday They reached Cleveland at 7 o'clock that night, and although fagged out, started moving again at 1 o'clock Wednesday morning.

Roberts does not mean to continue with the Thomas car all the way to Paris, as evidenced by the fact that he is entered in the Briarcliff trophy race as well as the Grand Prix to be held in France during July. When Roberts and Schuster, the alternate driver, quit, the car will be turned over to William Brown, to continue on the trip to Paris.

Just what has become of the independent car which started from New York City, one day before the main division in an attempt to beat the sextette to Paris, not even the New York newspaper which projected the American end of the adventure, seems to know. As recounted in last week's Motor World, the car had to be towed a great part of the way to Philadelphia—it is taking a different route-and after spending two or three days in the Quaker City the three adventurers got into a dispute among themselves and Driege and Hohman, left the city without Le Louvier, who claims to be the originator of the New York-Paris idea, and who, becoming piqued when the Paris newspaper promoting the affair refused to follow his suggestions, decided to organize a race of his own. According to Philadelphia advices not one of the three men knows as much about driving a car as the majority of garage office boys, and the result has been disastrous. The car has been lost sight of completely.

Reports received in this city last night show that the leading cars have run into a severe snowstorm and are making slow progress. Roberts succeeded in pushing his Thomas on to Kendallville, Ind., 891 miles. The Thomas got stuck in a snowdrift two miles from Kendallville and it was nearly midnight, Wednesday, before a party of farmers cleared a path for it to proceed. As it is leading naturally the Thomas can is having a harder time of it than is the De Dion, following closely behind. The leading car breaks the snowdrifts, so that it is much easier for the car behind. In view of this it is not surprising that while the Thomas car yesterday only covered 110 miles, the DeDion made 22 miles more. However, the De Dion ran into a big drift while turning off the main road in Corunna, and-alas and lackaday!-had to be towed into town by horses. In "races" of this sort, however, towing or anything else is allowable. It remained in Corunna over night. The Italian Zust succeeded in reaching Bryan, Ohio, 854 miles, last night, having made a remarkable run of 187 miles through the snow in its efforts to overtake the leaders. The Prothos was last heard from in Ashtabula, Ohio, but Cleveland reports state that it cannot be located, and is believed to be snowbound some miles from that city. The Motobloc, the tailender, now that the Naudin has withdrawn, is also stuck in a snowdrift about 20 miles from Erie, Pa., and Godard and his crew are taking advantage of their plight to secure a few hours' sleep.

If the present storm does not abate the crews will doubtless be compelled to shovel their way into Chicago yard by yard. A. J. Banta and Paul Picard left Chicago several days ago to meet the snow shovelers, and Picard returned to Chicago last night. He said that in all his experience he never hac seen conditions so terrible. Trees and fences are hidden under snow. Banta is completely snowed under, but refuses to go back. In 48 hours he has covered only five miles.

Odd Wail that Comes from China.

That the universal adoption of the motor vehicle for business and pleasure must ultimately work havoc with the Chinese cutlery trade, is the astonishing conclusion which must follow any contemplated shelving of the horse in favor of the more modern auxiliary of transportation. One of the constantly growing imports into the province of Shantung, China, is scrap iron consisting largely of old horseshoes. So great is the demand for this material that a recent single shipment of 300 tons was not considered at all extraordinary. The knife and tool makers all over the province use the metal in making their wares, claiming that it has a peculiar temper due to the constant beating it receives under the horses' feet, which it is impossible to obtain in any other way.

"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.



"76 GASOLENE" A DELUSION

Why the Baume Test Fails to Indicate Fuel Value—Evolution of the Processes of Production.

If the average motorist were to be told that "76 gasolene," which he has been taught to believe is the proper fuel for his engine, is no better than 60 or 80 gasolene, he would receive a distinct shock. If he were to be told further, that the ordinary specific gravity test, which has been held up as the proper basis of judgment for a number of years, has practically nothing to do with the essential properties of the fuel, as such, he would probably turn away in scorn. That such is the case under existing conditions, merely goes to show how far behind the times popular ideas may stray when based on custom and precedent.

It is by no means a novel suggestion that the gasolene produced for automobile consumption is far from the simple substance which its name implies it to be. Originally a plain fractional distillate from crude oil, employed to a limited extent in enriching the coal and water gas used for household illuminating purposes, the growth of the automobile industry has so influenced the market as to render it practically impossible to produce a simple oil answering to the requirements which have been built up under that inclusive name. What was one time largely a by-product and often thrown away, now has become an important staple in the market for the manifold petroleum derivitives. Incidentally, the status of the "naptha" or gasolene of commerce, has been changed to a remarkable extent, and in the course of the transformation, while its efficiency as a motor fuel has in no way been diminished, its composition, chemically and physically has undergone sufficient alteration to completely nullify the value of the specific gravity test.

It should be observed, that even before this change had become sufficiently marked to render the former standard of comparison of no avail, much confusion had been wrought by the common misunderstanding as to the relation between specific gravity. and the reading of the hydrometer by means of which it commonly is measured. Unfortunately for the non-technical observer, the average hydrometer, or "specific gravity indicator," as such instruments are sometimes erroneously termed, is graduated to read in the Baume scale. As it happens, 70.0 Baume, is the indication coresponding to a specific gravity of 70.2 per cent. This is the basis of confusion of the terms. It would do little harm were it not for the fact that the two scales "cross" at about this point, higher specific gravities being indicated by lower Baume readings.

In this way, the 76 gasolene of commerce would be of 68 per cent. specific gravity—were this indication always a reliable one. As will be shown presently, however, the so-called "76" does not always answer to the 76 test, whence much dissatisfaction and many complaints have arisen. That many of these complaints have not been well founded, also will appear presently. The accompanying table serves to illustrate the comparison between Baume and specific gravity, and is made to include the range about which so much misguided contention has hinged:

Baume	Specific Gravity	Ваите	Specific Gravity	Baume	Specific Gravity	Baume	Specific Gravity
60.0	.739	65.0	.720	70.0	.702	75.0	.685
61.0	.735	66.0	.717	71.0	.699	76.0	.682
62.0	.731	67.0	.713	72.0	.695	77.0	.679
63.0	.728	68.0	.709	73.0	.692	78.0	.675
64.0	.724	69.0	.706	74.0	.689	79.0	.672

In order to understand how the specific gravity or Baume test has come to lose its value as a measure of the suitability of the fuel, it is necessary to go back into the history of gasolene far enough to trace the increasing demand for it and the way in which that demand has affected its production. Originally, the naptha or benzine from which gasolene is made, was largely a by-product of the process of refining crude oil, or petroleum. In the early history of the oil industry, there was practically no market for naptha, and the bulk of that produced was allowed to go to waste, either deliberately or through lack of economy in the manufacturing processes. Eventually markets were created until it ceased to be a total loss, though it was by no means regarded as an important member of the crude oil family.

Its early general uses were chiefly confined to such manufacturing purposes as those involving the extraction of oils from vegetable or animal matter, the mixing of paint, and the solution of varnish gums. Its most important service, however, was performed in its application to the production of illuminating gas, where it ultimately eliminated the use of the expensive Cannel coal, substituting a domestic for an imported element in the raw material used. Yet even within the present decade, these uses had not begun to absorb all the naptha produced, and large quantities of it were burned under boilers, in order to get rid of the surplus without actually wasting it.

Then came the development of the internal combustion motor, using first gas, and then gasolene, as it had come to be known. For the purposes of motor fuel, it was found that a grade of gasolene which answered to the 76 test served to best advantage, and accordingly that basis was accepted as the standard by motorists and dealers, in a purely arbitrary manner. Soon, however, the rapidly growing use of internal combustion engines, chiefly in connection with the pursuit of motoring, began to create a demand for the standard fuel, greater that the supply. The by-product

had commenced to assume important proportions in the market.

So in time, the Pennsylvania oil fields, which had been the chief basis of former supply, were exhausted, and other localities were drawn upon to a greater extent than before. To-day, despite the fact that the United States is the greatest oil-producing country in the world, great quantities of naptha are imported from other localities, such as Sumatra and Borneo, in order to swell the volume of the product which even under these conditions threatens to become insufficient to supply the constantly growing requirement.

Just here one of the many peculiarities of the petroleum distillates requires especial emphasis. Though the crude oils themselves closely resemble one another, their chemical composition varies exceedingly. This variability is carried through all the products to a certain extent, so that in the case of the napthas a great amount of difference is observable. It may be supposed that the processes by which the product is obtained are largely the same in all cases, and that were it not for this basic difference in the crude oils, the resulting fractions would be precisely alike in all respects. As it is they vary to such an extent that in their original state they reveal strikingly different properties.

Consequently the production of motor fuel requires a judicious blending of different products in order to secure the volatil and thermal properties which govern its usefulness. In the blending process, specific gravity is entirely ignored. It is the object of the producer to develop a fuel which will evolve a maximum ignition pressure when burned with 85 per cent. of air, and which will flash at temperatures within certain closely defined limits. As a matter of fact, the gasolene in current use is found to vary anywhere from 76 to 60 Baume, which corresponds to a range of from 68.2 to 73.9 per cent. specific gravity. There is also a certain wide variation in the boiling point, which may vary from 120 to 330 degrees Fahrenheit.

It is on this account that the specific gravity test is of practically no value in determining the quality of the fuel. The socalled "Motor Spirit" which may be bought in the open market is intended solely for motor use. That is to say, it is produced with regard to the thermal and evaporative qualities, which govern at once the relative amount of power derivable from it, and the facility with which it may be carburetted and delivered to the cylinder in combustible form. Other gasolenes and napthas, such as are produced with specific regard to the demands of the sundry manufacturing purposes for which they are employed, are produced under similar conditions and their properties from the motorists' point of view must be regarded with more or less sus-

It is well known that the gas engine will run under certain conditions on almost any



fuel ranging from crude oil to absolute alcohol. But the most satisfactory supply from the general utilitarian point of view is the specialized product which is offered for the purpose and which, like his tires and his lubricants, the motorist must take at face value, without inquiring or needing to inquire into the chemistry back of them, or their own physical properties. The usefulness of the hydrometer in this connection has entirely passed.

Improved Top for Runabouts.

While the runabout with the double rumble seat has attained a degree of popularity with those who find in this type of car the desirable features of a compact, companionable turnout which may be readily converted into a more imposing vehicle, with accommodations for four persons, there has been difficulty encountered in obtaining a satisfactory top. The principal objection to be overcome lay in the necessity of having something constructed in such a manner that the bows should not interfere with the access to the rumble.

The Rands Manufacturing Co., of Detroit, have solved the difficulty by so arranging the bows that they do not cross the entrance to the rear seats of the car, either when the top is up or when it is folded back in a compact space. The top is attractive in appearance and though light is still very strong and can be readily made rigid when in use.

Street Refuse on the Air Screen.

An annoying condition, which occasionally occurs, in engines equipped with a carburetter having a self contained gasolene and air screen, is first made apparent by the engine running at irregular speeds. For a few yards or may be a block or two the power plant will be giving its full energy. then the engine slows down to almost a standstill and as suddenly will resume its rormal revolutions. When this occurs the screen, if removed, will probably show an accumulation of street refuse which has been sucked in through the air intake and packed on the screen, preventing a proper quantity of air from passing evenly into the carburetter. Remove the dirt and no further trouble will be encountered.

Temporary Repair of Cut Tire Casing.

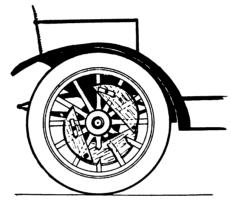
When a tire suddenly collapses and the shoe is removed to discover the reason for it, there may be found on the inside of the casing a cut which has gone well into the fabric without appearing on the outside of the tire. This may have been caused by an improperly protected lug—one from which the leather covering has come off—having made the cut when the tire was run on while flat. Cover the incision with a piece of leather and no further trouble will be experienced for a time, but unless a replacement is made at the earliest opportunity the tube will again be pinched as the leather will "travel."

THE MOTOR WORLD

BARREL HEADS AND HEAD WORK

Combination that put a Crippled Wheel in Splints—How Some Chauffeurs Can Meet Emergencies.

"I wonder what one of these liveried automobile attendants, whom we frequently see driving cars, would do if his car should skid into the curb and crush in a rear wheel," remarked a man whose extensive automobile interests had offered the opportunity of getting acquainted with most of the conditions and experiences which may be encountered. "Or rather, I don't wonder, for I know; it would be a telephone call for a new wheel or a truck. When you're



CRIPPLED WHEEL IN SPLINTS

all togged out in a fine 'monkey' uniform you can't be expected to do much in the line of roadside repairs; and besides," he added, "the fellows who wear livery are not able, as a general thing, to do much more than drive a car. If they were they would not have to dress like coachmen.

"I saw a thing a few days ago that well illustrates the native ingenuity of some men," he continued. "It was on the outskirts of the city. In making a turn the machine, a runabout, skidded into the curb, and down went a rear wheel with four spokes broken. The chauffeur got out and took a look at the wreck, then calmly lighted his pipe, and I could see he was doing some real thinking while he made a careful examination of the damage. In a minute or two he straightened up, looked up and down the neighborhood, and then made a bee line for a store with a grocery sign above the door. In a few minutes he came back with an odd assortment of lumber under his arm, consisting of barrel heads and box covers, with which he proceeded to get his car into temporary shape for its trip to the garage.

"First jacking up the wheel he forced the rim back to as near its original shape as possible, then a half barrel head was placed on the outside of the wheel and two others like it were placed on the opposite side in such a position that the points of the two met and overlapped the one in the center, that is the pieces alternated, one on the outside of the wheel overlapped the one on the inside, which was in turn lapped by the third one. Bolts were forced through all these and when the nuts were tightened up the board in back, which covered the space where the broken spokes were, was drawn tight as possible toward the other two boards, which were against the good spokes and the whole formed a pretty substantial brace which permitted of the car being driven home under its own power. It was one of the cleverest roadside repairs I've ever seen."

Started His Fire with Gasolene.

An incident, which fortunately was funny, though it might have been extremely serious, occurred during a recent cold spell in a private garage which has as an adjunct a well equipped repair shop in which a mechanic and a German helper are always busy caring for the seven cars which comprise the family's automobile equipment.

For reasons which no sane man can understand, the garage and shop were heated by stoves, and it was a part of the helper's duty to attend to the fires. One cold morning when he arrived he found the big stove cold and the fire out; he quickly prepared the paper and wood and, to get quick action, added a generous sprinkling of gasolene. Had he lighted it at once all would have been well, but he was called away, and about ten minutes later returned and applied the match. In an instant there was a roar, the top of the stove went up and the doors blew out, while a sheet of flame enveloped the stove and rose almost to the ceiling.

In some miraculous way the helper escaped without injury, and no damage was done, save to the stove, which was destroyed, and to the helper's nervous system, which received so severe a shock that it was depicted on his countenance and was further manifested by an outpouring of German invective which furnished what proved to be the humorous feature of a serious experiment.

Why Noises Should not be Ignored.

Though the noise made by the vibration of some unimportant part of the equipment -such as the glass of an oil light for in stance—is annoying, it is often considered too trivial to be given immediate attention. and it is permitted to continue until an entirely convenient moment is at hand or until it is repaired for lack of something else to do while "killing time." Such a detail may be unimportant to the general running of the car, but the habit of letting things go until "to-morrow" is one easily formed and for a driver to accustom himself to unnecessary noises and to become so hardened to them that he doesn't "bother" to correct them, means that he is subjecting himself to a condition, and putting himself in a position where he will soon cease to give heed to warnings which portend more serious disarrangements with consequent expensive results.

SAMPLED ROADS OF ALL SORTS

Johnson's Circuitous Trip from New York to Savannah—Ten States Visited in True Touring Style.

One of the longest tours of recent years has just been successfully completed by R. H. Johnson, a member of the Touring Committee and of the Good Roads Committee of the American Automobile Association. Mr. Johnston drove his 30 horsepower White steamer from New York to Savannah, by a circuitous route, passing through ten states and covering a total distance of 2,044 miles. Mr. Johnston summarizes his trip as follows:

"We started from New York, not with the intention of doing any sensational stunt, but with the purpose of finding a good touring route between North and South, and to do what little we could to forward the good roads movement. We were not concerned with finding the shortest route, but our idea was rather to see as many places of interest as possible. We first proceeded to Philadelphia and from there to Harrisburg. Here we turned southward and passed through Gettysburg, climbed the Blue Ridge, and continued on to Hagerstown, Maryland. Here we again turned westward and journeyed to Cumberland where commences the old National highway. We followed this one road a total distance of 320 miles, first over the Allegheny Mountains, where we had many climbs of one, two and three miles, then through Wheeling, W. Va., and Columbus, Ohio, to Springfield. Here we turned southward through Dayton to Cincinnati. Then we had a delightful 300 mile trip through Kentucky, where we found many more miles of good roads than we had anticipated. We visited Lexington, the center or the famous blue grass, horse raising section; Frankfort, the picturesque capital of the State, and Louisville. At Frankfort we met William J. Bryan, who rode with us for a short distance and who expressed his sympathy with the good roads movement.

"South of Louisville the roads were rather rough, but the going was not particularly severe, except on the 25 mile detour we made from the main route in order to visit the Mammoth Cave. The next large city which we visited was Nashville, Tenn., and then we were agreeably surprised to find a toll road from that city to the Alabama line, 100 miles to the south. We continued due south until we reached Huntsville, Ala., where we turned east. Thereafter, we had some very bad mud, due to the abnormally heavy rainfall, but we kept going and reached Chattanooga in good season, crossing the Tennessee River on a flat-bottomed ferryboat, propelled by two

"We next climbed Lookout Mountain,

visited Missionary Ridge and the battlefield of Chickamauga, where there is a most imposing array of monuments, some for the Blue and some for the Gray. From Chattanooga we proceeded almost due south through Rome, Cartersville, and Marietta, to Atlanta, and from there to Macon.

"The trip from Macon to Savannah was by far the hardest portion of the journey. The roads are hardly more than trails through the sand, which becomes heavier as one nears the coast. But the principal reason why few automobiles ever attempt this trip, even at a more propitious time of the year, is because almost all of the streams are without bridges. Even those streams which have bridges, must be approached through water, as the bridges are built only over the deepest parts. As we made the trip after a season of heavy rain, it can be imagined that we had to do some rather sensational fording. Often the water washed over our big 36-inch wheels. Several times our burner was extinguished. But this did not bother us, as we always hau a reserve supply of steam in our generator sufficient to carry us to terra firma. We were almost three days in making the 200 miles between Macon and Savannah, which was by far the slowest progress we made on any part of the tour.

"Our total elapsed time from New York to Savannah was three weeks and five days. It should be noted that we were not out for records, but took time to see all the places of interest in or near our route. As is evidenced by our continuous progress, we had no trouble with the car, and our tire troubles, despite the severe character of much of the road, were almost negligible.

"I think I may safely say that during the trip we had every known kind of weather. ranging from the blizzard we experienced in the mountains near Uniontown, Pa., where we could hardly see the road a vard ahead of us, to the delightful sunshine of Georgia, where we discarded coats, gloves and even hats. Furthermore, if there is any kind of road which we did not find during our 2.044 mile journey, that kind must be something better than the magnificent government road which runs along Missionary Ridge. I do not believe that anything can be worse than the occasional patches of quicksand in southern Georgia, the black bottomless mud of Jackson county, Ala., or the grades of stratafied rock leading to the Mammoth Cave."

Paris Horse Census Shows Decline.

An indication of progress, which doubtless will be eagerly grasped by the prophets of a "horseless age" is that revealed by the falling off in number of horses used in Paris. In the last ten years this has amounted to exactly 10 per cent. In 1897 the equine census revealed a total of exactly 92.026 head of horses, while the corresponding figure for 1907 was only 83,458. In the 8th "arrondissement," the Champs Elysees, the drop amounts to 50 per cent.

NOT REALLY BIRDS OF A FEATHER

But the Chauffeur Who Tried to "Flock" with the Millionaire Didn't Know—
Where Extremes Met.

The cold wind "howled dismally" around the vicinity of Forty-second street and Broadway. It also "howled dismally" elsewhere. The cold wind usually "howls dismally" or "bitterly" in Ouidian novels.

In front of the \$1,000,000 lobster palace stood two cars. One was a \$10,000 car. with a \$5,000 body. The other was a \$2,000 car with a \$346.98 body. In front of the \$10,000 car with the \$5,000 body stood a young \$1,000,000,000-aire. He felt that life had its compensations, after all, for he had just eaten a \$1,000 dinner, with \$50-per-bottle wine as a side drink. An \$8,000 fur coat, \$300 fur cap and \$250 fur gloves protected him from the cold winds that "howled dismally." Ever and anon he removed the \$100 perfecto from his lips to insert a 24 karat gold toothpick, lest a visage of the \$1,000 dinner should remain. He was waiting for Mrs. \$1,000,000,000-aire, who had stopped to speak to some friends.

In front of the \$2,000 car with the \$346.98 body, stood a very ordinary chauffeur, in a "goat fur" coat, and a 98-cent cap purchased from a cut-rate bargain store in the locality. His gloves were not fur, and he stamped his feet and swung his arms vigorously in a vain effort to induce circulation. He was only a poor chauffeur, and had not had anything heavier that coffee and rolls since morning; it was now nearly 4 o'clock. He waited for his employer who was within the \$1,000,000 lobster palace.

Finally the Very Ordinary Chauffeur walked over to the Befurred One, and said:

"Say, Bo, you must be in soft. Whose car 'ye drivin', anyway?"

Thus is it made plain that men are not always what they seem; also is it illustrated how pride may be humbled.

Automobile Rule Applied to Camels.

In America it is the automobile which the authorities insist shall travel only at a moderate speed, besides being provided with light and sound producing apppliances, but on the sunbaked promontory of Aden the corybantic camel has come in for speed restriction. According to report an order has been issued in Aden that "all camels going beyond a walking pace after sunset must be provided with a bell." Those who have never beheld the camel when his foot is on his native heath, or rather sand, can hardly grasp the idea of the unwieldly Bactrian being induced by any conceivable means to get up a speed faster than that of a ponderous Broadway "cop." The real reason, however, is that the animal's feet are so big, soft and clumsy that they make practically no noise.



POWER WASTE IN CYLINDER WALLS

Its Proportion to the Amount Developed Charted from Tests—How the Results were Reached.

It is quite generally understood that of the total power developed by the burning gas within the cylinder a large proportion goes to waste, the principal sources of loss being the exhaust and the cooling water, or, in the case of the air-cooled motor, the air showing the loss through the jackets in terms of horsepower, as compared with the second—the power developed at the fly wheel—makes an impressive showing.

The diagram is based on a series of tests conducted by White & Poppe, Ltd., Coventry, England, upon one of their own four cylinder vertical engines, measuring 100 by 110 mm. The curves, and the following outline of the method of test, as published in the Autocar, show that the results are closely checked, and authentic. The actual efficiency under the various conditions of speed

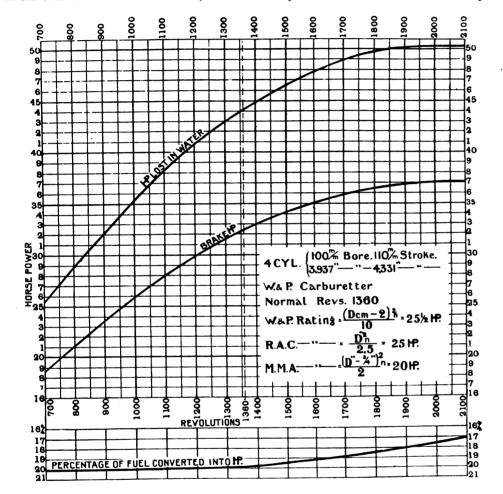
pipes to the water jackets indicated the initial and final temperature of the cooling water. The rise in temperature, taken in conjunction with the amount of water passed through in a given time, gave the means of calculating the work lost or absorbed in the cooling water.

"Tests were made of the engine running light when electrically driven to ascertain the frictional resistance of the engine itself. The losses in the exhaust gases were not directly taken, but calculated after the brake-horsepower and the cooling water power absorbed had been determined. The difference, of course, is due to engine friction, radiated heat, and exhaust gas losses.

"The petrol employed had a density of .72, and through the experiments the approximate petrol consumption was .72 pint of petrol per horsepower per hour. The heat value of the 'petrol' was practically 11,000 per kilogram, and one calorie was taken as 424 kilogram-metres. Calculation showed the theoretical horsepower to be 5.1 horsepower for each useful horsepower developed. The efficiency, therefore, of the engine was 1/5.1, or practically 19.6 per cent. . . .

"The normal engine speed of this particular type of engine was 1,360, and at this speed it will be noticed that the brake horse-power curve indicates about 32½ horse-power, whilst the horsepower lost in the water is no less than 44 horsepower. As a matter of fact, if the whole of the fuel employed was turned into useful work, assuming very small engine friction, and that nothing was lost in the cooling water and the exhaust gases, the actual horsepower developed by the fuel consumed at a speed of 1,360 crankshaft revolutions would be something over 160 horsepower. . . .

"The lowest of the three curves gives the percentage of the fuel converted into horse-power. It will be noticed that as the speed increases the percentage of fuel converted into horsepower decreases, and this might only be expected, because as the speed of the engine increases the compression be comes slightly lower, owing to the fact that the cylinder is not completely filled at each stroke"



immediately surrounding the radiating flanges on the cylinder. In fact, it is unquestionable that in many instances, the amount of loss localized in the cylinder walls even exceeds that from any other source, nearly half the power developed actually being wasted in heating the jacket water in some instances of poor design, while frequently more power is lost in this way than is converted into work.

The relation between power developed and power lost is in no way better illustrated, than by means of a graphic table, like the accompanying, which shows at once the power developed at the fly wheel throughout the speed range of the motor, the power lost through the cylinder walls, and the thermal efficiency of the motor. The third curve, represents a concise summary of the results expressed by the other two. The upper of the two first-mentioned curves

and load shown by the test, of course appertains only to this engine, the object of the trials being merely to establish in a general way, the relation between power developed and power lost through the walls. This factor, however, may be taken as fairly representative of the results obtained ordinarily in current practice.

"The engine was mounted on a test stand and fitted with air braking vanes, so that when the engine was run at a certain speed the horsepower was definitely known without calculation," says the authority quoted. "The accuracy of this method of testing was in the first place determined by an electrical checking method, so that any error could not come into the observations. Water was circulated through the jacket of the engine, and the amount passed through in a given time was carefully measured. A thermometer placed at the inlet and outlet

Systematic Inspection of the Car.

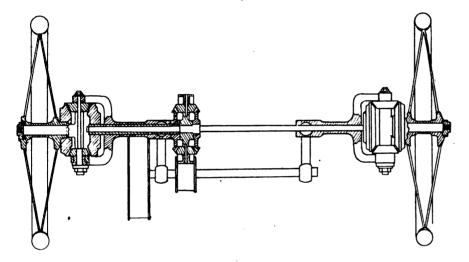
While a general inspection of the entire car at frequent intervals is always advisable. it is well also to make a systematic investigation with a definite purpose in mind. For instance, look at every nut on the car to see if those which should be protected from coming off by a cotter pin always have this little detail and where it has fallen off, or been neglected, supply the deficiency. And again, look for loose nuts and have a wrench in hand to try each of them. In making these specific searches one will notice other things which are to be corrected, while a general investigation may often fail to discover the disarrangement of minute details which, though small, are of great importance.

AXLE PROBLEM IN FRONT DRIVE

Some of the Solutions and Wherein They
Fail—Application of the "Jack-in-theBox" Idea.

However satisfactory the principle of driving and controlling the vehicle by means of the front wheels may be in theory, the fact remains that in practice it is very difficult of achievement—at least according to present notions of structural requirement and possibility. In such electric systems as permit the mounting of the motor directly in the wheels, or in the scheme of the "gasolene wheel." which was developed experi-

axle, is applied in one of the pioneer inventions of this class, that of Messrs. Lacoste and Duncan, which was granted an English patent as long ago as 1896. It consists merely in the manifold application of the principle of the common bevel gear differential or "jack-in-the-box," as it is sometimes familiarly known. The differential balance gear is mounted in the driving shaft as usual, while at either end of the axle is mounted a second differential group in which the usual "floating member" carrying its two bevel pinions, is made the steering pivot, while one of the two larger bevel gears is affixed to the end of the driving shaft and the other mounted on the wheel. The accompanying illustration shows the arrangement in somewhat idealized form.



mentally several years ago, the problem is rendered comparatively simple. Where the motor is located in the chassis so that it is necessary in addition to transmitting the power to the driving wheels and making some provision for differential motion between them on turns, to allow for the deflection of the wheels without interfering with the driving function, the maximum complication of requirements exists.

The most natural way of attacking the problem from the standpoint of present design, is to construct the axle practically as though it were the ordinary live rear member, except that the wheels are mounted on steering knuckles, and the driving shafts are connected to them through universal joints. Several objections to this method arise, however, notably owing to the varia ble velocity and resistance of the universal joint when operating under conditions of wheel deflection. A part of this objection may be overcome by doubling the joints in each of the individual driving shafts, but this involves the objection of adding to the mechanism, introducing also, lost motion, friction and liability of breakdown in the ratio of two to one, theoretically at least.

A more obvious method, and one which from the theoretical point of view is far more desirable since it permits the deflection of the steering wheels to take place without affecting the driving function of the

The driving force is transmitted to the wheel through the intermediary of the pinions, which incidentally reverse the direction of motion, thus necessitating the backward rotation of the driving shaft for forward motion of the vehicle. The extreme nicety of the arrangement, however, exists in the provision which it makes for independence of the steering movements of the wheels. Supposing the vehicle to be stationary for the moment, it is evident that as the wheels are swung from one "lock" to the other, they must roll about the pivots. even though cambred in such a way that their points of contact with the ground are central and stationary under these conditions. In the arrangement under consideration, the wheels are set perfectly vertical so that in swinging into or out of lock they roll. The driving gear, however, is not affected by these movements. If it makes no difference which way the wheels are swung when the driving gear is at rest, naturally, it does not affect the driving function if they are swung when the vehicle as a whole is in motion, so that the complete disassociation of the two purposes is accomplished.

Judged on the basis of present driving systems, this arrangement is obviously crude and over complicated. Regarded as a study in design, however, it is highly interesting and suggestive. Several other methods of front driving and steering were contemporaneous with this arrangement, notably that covered by the Sydenham patent of the same year. For the most part they were too crude to be considered at all seriously now, however. An example of this early development which was extremely simple, but equally impractical from the present point of view, was that of employ ing a swinging front axle of the live type, carrying a differential balance gear the motion of which was controlled by a pair of brakes. Applying one of the brakes, retarded the wheel to which its side of the differential was connected, correspondingly advancing the other, and so swinging the axle. It is not surprising to learn that this system was not sufficiently "sensitive" to permit of continued use, or that other drawbacks arose which served to discontinue its use. Considered in the broadest possible way it appears that front actuation and control is sufficiently desirable to warrant a general renewal of attention. This is particularly true in the case of the commercial vehicle.

Special Ammeter for Testing Coils.

Attention directed to the fact that with the ordinary type of multiple vibrator spark coil, it is practically impossible to obtain absolute synchronism in the ignition by the ordinary methods of adjustment in which the eye and ear alone are employed in judging the quality of the spark, has brought out that the Connecticut Telephone and Electric Co., Meriden, Conn., are marketing a special, low-reading ammeter, termed a coil current indicator, which is made for exactly this purpose. It may be connected to any of their coils by simply "plugging-in" to one of their regular switching jacks, and gives a close registration of the consumption, thus furnishing an ideal check on the adjustment. The use of a special ammeter constructed for the purpose, is particularly helpful in this connection, as was pointed out, since by testing the current in the primary circuit it is possible to determine the exact consumption of the coils for various adjustments of the vibrator.

Water Cooled Crank Case and Gearset.

Water cooling for the crank case of the motor and the transmission gearset, has not been heard of hitherto, nor would it generally be thought necessary. A system designed to effect this, has recently been devised and patented, however, by the Daimler Moteren Gesellschaft, fountain head of all the Daimler and Mercedes products. The water is circulated first through the jacket surrounding the gearset, then around the motor crank case, and then through the cylinder jackets, after which it passes through the radiator before returning to its original path. The object is to prevent any rise in temperature due to possible excess of friction; and also to preserve a uniform temperature under all possible conditions.



EFFECTS OF COMPROMISE ON DESIGN

How the Practical Medium Between Extremes is Developed—Examples in the Evolution of the Automobile.

While the evil of going to extremes is equally apparent in all things, it is nowhere better emphasized than in the realm of mechanical engineering, the principles of which closely hedge round what is broadly known as "practice." Still it is rather an unusual notion that in consequence of this, practice is nothing more nor less than an array of compromises, sanctioned by usage and common consent. In this connection a foreign authority points out a number of instances illustrative of the way in which just this effect is produced by the conditions limiting the designer of the motor car.

"It is doubtful if even the designer himself thoroughly realizes the important part which 'compromise' plays in his designs and of the many others interested in automobilism few probably have given the matter much thought," he remarks. "Let me make my meaning clear, and I shall be able to do this more easily by selecting some 'detail' for discussion. A connecting rod comes to my mind as being, perhaps, as good as any.

"How does compromise affect this particular part? Suppose we imagine a rod of extreme length coupling the piston to the crank pin. We should in this case get practically no side thrust at all on the piston, for the rod would at all positions of the revolution of the crank occupy a position nearly parallel to the axis of the cylinder, and from this point of view such a rod would be ideal. It is easy to see objection, however, to such an arrangement. The rod would be excessively heavy, the overall length of an engine so fitted would be great, and expense of production would be proportionate. On the other hand, we might employ an exceedingly short rod, or, say, one equal to about the length of stroke of the piston; hence we should get enormous side thrust, and consequently wear and tear, on the piston and cylinder walls. Such a rod would, however, be light, and therefore suitable for an engine having a high speed of revolution.

"Hence we observe that it is necessary to compromise between the two extremes and steam engine practice in this case, many years before the introduction of the petrol motor has decided this 'happy medium' for

"Let us take another case and discuss it in the same fashion, and this time we shall select a part where the points to be considered are more numerous. A rear road wheel fulfills these conditions well. In the automobile of ten years ago it was customary to use considerably larger wheels than is the case at the present day, obviously owing to the use of them on horse-drawn vehicles. Various objections to large wheel diameters, however, present themselves to us. Firstly, it is not easy to reduce the speed from the engine to the road wheels to a sufficient degree without entailing big frictional losses in the process; secondly, the cost of a pneumatic tire of such a size would be great; thirdly, it is more difficult to build a large diameter wheel of sufficient strength for automobile purposes; and, fourthly, a large wheel practically necessitates a high, and therefore unstable, car. It appears that we can only put one advantage against these four objections. This advantage is, however, a considerable one -a large wheel conduces to very easy riding and reduces road shocks. We should, perhaps, add that a tire fitted to such a wheel would last longer, on account of its fewer number of revolutions per mile.

"Taking the case of the very small road wheel, we shall find that a small wheel in creases the traction force necessary, especially over rough roads; that it puts more work on to the springs, and that it necessitates various parts of the chassis approaching perilously close to the road. On the other hand, the small wheel is cheaper to build, and its tire is cheaper than that of the large wheel. Fortunately for the tire manufacturer, the problem of wheel diameter has been boiled down to one or two sizes, but this boiling down process amounts to a system of compromise.

"There is, indeed, hardly a part of the modern motor car which has not at some time or another been subjected to this compromising process. Experience proves a part too light, we strengthen it; too short, we lengthen it; and so we proceed till eventually we arrive at a correct size and strength, which, forgetting the system of change which has brought us to it, we are apt to regard hereafter as fixed and unalterable."

Best Method in Tightening Chains.

It is a common practice to "jack up" the car when chains are to be tightened, and while this permits of the wheel being turned so that the chain may be "felt" in all positions of the sprockets, it bears little or no relation to the condition in which the chain will be when the car is again resting on the ground. The only safe and sure way to make chain adjustments is to do it with the car standing in its normal position and after tightening or loosening the strut rods push the car about the floor, constantly lifting or trying the chain, so that "high spots" in the sprockets may be provided for. In this way there is little danger of getting a chain too tight, which condition is far more serious than having it too loose, as the strain on the jack-shaft will result in worn bearings, if not the more serious mishap of springing the jack-shaft. Care may kill a cat, but extreme care makes just the difference in an automobile that lies between big upkeep expense and necessary outlay.

WHERE THREE WHEELS SERVE BEST

An Observer's Views on Transportation Conditions in Egypt—Advantages of Single Wheel Drive.

Whatever may be the characteristics of the motor vehicle as finally developed from its present tentative condition, it is plain to see that no absolutely fixed standards of construction can be applied to it in all of its possible applications. Special uses require special adaptations, and it will not be surprising if the business and pleasure cars of the future exhibit far greater structural differences than is the case to-day. In this connection the observations of a student of transportation conditions in Egypt are of interest, because it is his judgment, based on a number of years of direct experiment, that for use in the desert and in countries where practically no roads exist, the three-wheeled tractor, and the twowheeled trailer are the most acceptable vehicles for motor haulage. In explanation of this apparently wild conclusion he gives the following arguments in favor of threewheeled traction under the conditions here noted:

"1. With three wheels there is a three-point suspension on the road.

"2. The power being applied to the rear wheel in the middle of the frame, gives a direct application of power along the center line of traction, and all energy is directed along that line.

"3. The weight on the driving wheel can be easily regulated to give the requisite amount of road adhesion according to nature and surface of track.

"4. There is no complication of differential gearing, as is required when conveying the drive through the two rear wheels of an ordinary car, and none of the attendant strains of driving first on one side wheel and then on the other, according to the nature of the track.

"5. The simplicity of gearing between the engine and the driving wheel.

"6. The single wheel drive enables a driver to select the hardest part of the track for his road or driving wheel.

"In place of four-wheeled trailers and the consequent limit of wheel diameter for steering lock on short turns a two-wheel trailer with long platform and large diameter wheels is found to be more suitable for negotiating either soft or rough ground, and this type of carriage manoeuvres much more easily on awkward bends. The two-wheel cart for heavy transport is no new idea," he concludes, "and is in regular use in Southern Europe, giving every satisfaction on heavy draft work with horses."

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau St., New York City.



JONES PRODUCES A TAXIMETER

First American Fare Recorder Has Special Features—Variety of Records and Safety Against Tampering.

While this country has not been slow in adopting the taximeter vehicle, practically all of the "fare recorders" employed have been importations, as no American inventor who has been actively interested in producing the indicator has offered his device for general use. But the matter has been receiving careful attention from at least one American and Joseph W. Jones, whose speedometer is so well known, now has placed on the market an instrument to be known as the Jones taximeter.

This latest addition to the Jones line is an instrument about 7 inches in diameter by 4 inches thick. The dial face is of silver with figures indicating the rate or tariff, the total fare to be paid by the passenger and a separate indicator for extras. On the reverse side is another dial on which is indicated the total sum paid to the driver, the total mileage and a trip mileage, which latter can be reset by the operator at any time. There is also a record of the number of trips with single and double tariff.

The meter is arranged to display a "Vacant" sign which is thrown to the right, into a horizontal position when it indicates on the dial tariff (1) and at the time indicating an initial charge of 30 cents for the first half mile, when a passenger enters the vehicle. After this distance has been traveled an additional charge of 10 cents for each quarter mile is added to the total. Trunks and other baggage for which a charge is made, are recorded by turning a knob which controls the "Extras" dial, and adds the sum recorded to the "Total Fares."

The meter is constructed so that if the "Vacant" sign is thrown to the left until a horizontal position is obtained, the same initial charge is recorded, after which there is an additional charge of 10 cents for each one-sixth of a mile, in this way covering the cost of 4 or more passengers.

The taximeter contains also clock mechanism which, when the "vacant" sign is down and the vehicle standing, causes a charge of 10 cents to be registered for each 6 minutes of waiting; this charge being added to the total. This is all arranged mechanically so that the driver has no control over the instrument except to start and stop it. On the passenger leaving the vehicle the driver throws the "Vacant" sign to a vertical position, resetting the figures under "Total fares," and turning the "Extras' to 0.

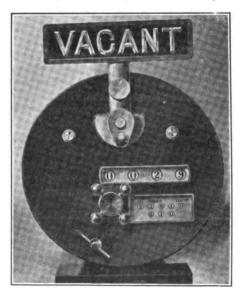
The instrument is also arranged so that it cannot be tampered with or put out of order, or the "Vacant" sign or extras changed while the driver is absent. This arrangement is necessary for the reason

that maliciously inclined persons might change the tariff or ring up extras which, of course, the driver would have to account for to the company. In fact there has been some little trouble in this connection on account of the existing jealousy between the horse cab drivers and the "taxi" cab drivers. The "taxi" cabs being smarter and



more popular have been getting the bulk of the trade. When a "taxi" cab driver leaves his car for a few minutes, the horse cab driver rings up a few extras, etc., which makes the "taxi" that much out of pocket. To overcome this objection some of the cab drivers have arranged a small padlock on the taximeter, which, however, does not add to the appearance of the instrument.

Jones taximeters are now being manufactured, and will be leased to operators of taxi" cabs, horse cabs, etc., and the Jones



company attaches, repairs maintains and guarantees the instruments. It is believed that this is the only satisfactory method on which to operate the instruments. The inventor expects to visit Europe in the spring to introduce this taximeter and to dispose of the European patent rights.

ONLY A BIT OF BARE WIRE

But It Cost the Chauffeur a Long Search—
One of the Many Elusive Causes of
Motor Trouble.

"I think the hardest problem in automobile troubles that I ever encountered," said a professional driver whose years of experience entitled him to be heard with attention, "came to me one afternoon as I went out of the garage with only time enough to meet the owner as ordered and with no leeway for punctures or anything else. I started with everything working in fine shape, but when about two blocks had been traversed the machine slowed down and seemed to lose power with ever increasing rapidity. I headed back for the garage and could barely make it on first speed.

"The first symptoms were the same as would have been encountered with worn out piston rings letting the mixture into the engine base when the heat of the engine had made the oil thin, as we generally express it, but I knew that my engine was in prime condition and immediately eliminated that possibility from consideration and turned to the battery. A meter showed that I was right; the battery was way down; so I put in fresh cells and started again. I had not gone a block when I found the same condition to exist.

"Of course I was guessing. There was no use of looking at the timer except for short circuits, so I made a careful examination with that in view and satisfied myself that all the contacts there were well protected. The secondary circuit revealed the same satisfactory condition, the vibrations on the coil buzzed as they should buzz, and the battery connections were perfect—yet I had too little 'juice' to get explosions before the piston was way down; not enough spark to fire one compression.

"Again I put in fresh cells which I first tested with a large meter that I knew to be in perfect condition. The battery was all right, yet a little running on the floor weakened it perceptably and I was certainly stumped. I thought that it must be in the coil, yet when the plugs were laid on the cylinders and the engine turned over a fine spark resulted.

"I worked on that problem for nearly two hours. At last when tired and disgusted, the solution was found. A bit of insulation had worn away from one of the primaries on its under side just where it passed over the metal piece to which was attached the vibrator spring and this permitted a continuous flow from the battery—a direct circuit. The end of the wire was connected on the bridge and by its contact with the metal support of the vibrator a divided circuit was established permitting an abnormal consumption of current."

WHERE KNOWLEDGE IS RFAL POWER

Guesswork Apt to Make as Many Troubles as It Mends—Some Suggestions for the Driver.

In the not distant past it was a common sight to see an automobile drawn up by the roadside, a miscellaneous assortment of tools beside it and the driver distorting himself into various attitudes, wonderful to behold, seeking the seat of the trouble that caused the delay. These sights are now rare, thanks to the improvements that have been made in construction, but more especially because of a general knowledge of the functions of the different parts of the gasolene engine.

While it is true that most drivers are able to diagnose symptoms and locate any disarrangement in a very few moments, it is equally true that there are many who are possessed of only a superficial knowledge of the construction of their power plant, and when something goes wrong it is more luck than good management if they succeed in remedying the difficulty.

Of course the advice to this class is to learn all about their machine, as there are few disarrangements of the mechanism that are not easily adjusted, if one but knows where to look for them. The man who trusts to luck usually goes from one thing to another without rhyme or reason; he tightens nuts or changes ad'ustments with a vague hope that by some stroke of fortune he will hit on the right thing. Generally he does hit on it, but not until something else has been put out of commission by his unintelligent tinkering, with the result that when he attempts to start the enginewhich had stopped, say, for instance, because of a loose battery connection-it fails to run because he has spoiled the adjustment of vibrators while looking for the initial trouble. He finally gets the machine running, but when similar symptoms are again apparent, the same lengthy investigation must be indulged in.

A good rule to follow is to never turn a screw unless you know why you are doing it. The policy of "guessing" makes far more trouble than it corrects. Every part of a gasolene engine has a definite purpose; and to alter its position, without having a thorough understanding of its functions, is simply to invite trouble. Do one thing at a time, know why you are doing it, and then try results before looking further and you will learn the significance of the different symptoms and be in a position to make all necessary adjustments or corrections in the least possible time and at the least personal inconvenience.

Glidden in Land of the Pharaohs.

Recent and contemporaneous part way round the world tours to which the automo-

THE MOTOR WORLD

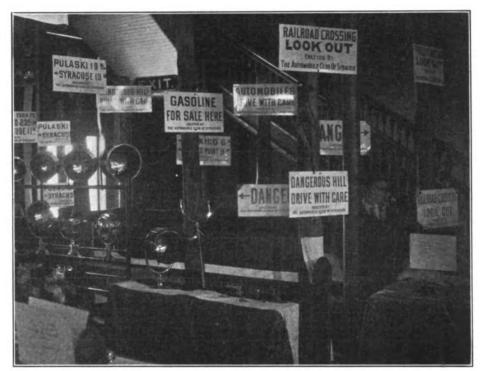
bile is more or less accessory have served to eliminate pretty largely from the popular mind interest in the only original globe girdling motorist, Charles J. Glidden, who probably would have been totally forgotten long ago did he not occasionally return to civilization to inform its peoples of his progress. Races from anywhere and nowhere to Paris do not affect Mr. Glidden's progress in the least, however. He is at present "doing" Egypt, with the Holy Land in immediate prospect. His present travels total 42,367 miles, and he plans to add another 2,000 miles to it before this stage of his peregrinations is concluded.

It is worthy of note in the light of other

ROAD SIGNS OF THE RIGHT SORT

Placed for Guidance and Warning by the Automobile Club of Syracuse—Their Character and Variety.

With signs to the right of him, signs to the left of him, signs right in front of him, guiding his course, there is little excuse for the tourist, even "the stranger in our midst" encountering an unexpected condition or being required to seek information additional to that found on the signs which have been erected on guide post, telegraph pole



DISPLAY OF ROAD SIGNS AT RECENT FRANKLIN SHOW

and more theatrical world touring ventures, that the Glidden junket is purely a pleasure exploit. When natives are hostile or roads are particularly rough, the Glidden party takes to boat or rail, or whatever happens to be the most comfortable mode of travel, while the car is sent around the other way, or packed along with the family luggage to some point where it may be put again in commission to add to the owner's world knowledge and automobile mileage.

Chauffeurs' Union Claims 978 Members.

The Chauffeurs' Protective Union of Greater New York has elected officers for the ensuing year as follows: President, A. Rogers; vice-president, C. Pollock; recording secretary, F. Kiernan; treasurer, Albert Oliver; board of trustees. John Harvey, three years; J. Brady, two years, and T. White, one year; business agent, J. Murphy. The organization was started a year ago with 265 members and now numbers 978, or at any rate that is the number given out for public consumption.

and buildings along the roads in the vicinity of Syracuse, N. Y.

With enterprise which is to be highly commended the Automobile Club of Syracuse have placarded the highways with signs which give warnings of dangerous curves, steep hills and uncertain roadways and with instructions as to where gasolene may be found, trolley and railroad crossings encountered; distances from place to place are given while arrows point out the roads. Local speed ordinances are proclaimed and the needs and desires of the automobilist are anticipated and the ways of obtaining them pointed out "so that he who runs may read."

These signs were displayed at the recent Franklin Show in Syracuse where they were grouped, as shown in the illustration.

"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

DEFENDS "SIX DAYS TICKET" IDEA

Commissioner Smith Discusses Constitutionality of Jersey's Proposed Tax on
Non-resident Automobilists.

Study of the proposed changes in the New Jersey automobile law has led persons both within and outside that State to the conclusion that a special license for non-resident automobilists would be against the constitution of the State, falling under the head of special or class legislation. The issue has come to the attention of Commissioner J. B. R. Smith, who had the following to say in relation to it when the matter was broached in a newspaper interview:

"There has been much adverse talk in connection with the section of our law which provides that automobilists from New York or other States who use our roads are obliged to pay a license while in this State, regardless of the fact that they have already been licensed by payment of the fee required by their native State or States. Most of the criticism has, of course, been on the part of the foreign automobilists, or residents of other States, who can not see why they should pay two licenses for operating their machines, even though they do cross a State line in their travels. Some of our New Jersey automobilists take the same position because New York and other States do not charge them an additional fee if they have paid a license here. On all sides one great, important fact in connection with this particular phase of the automobile problems of legislation seems to have been forgotten. It is that our State Constitution inveighs strongly against special or class legislation, and that in the event of New Jersey exacting a license fee from its own resident owners and users of automobiles and not from foreigners resident or other States) who come into our State, such action could be upset by any New Jersey resident who cared to test its constitutionality. To me, and to others who have made the subject a study, it seems that for the State to specifically exempt foreign automobilists from a license fee, or to permit them to go free from such a tax without any legislation upon the subject, would be distinctly class or special legislation. It would be discrimination by the State against its own residents and in favor of visitors and would, to my mind, be clearly unconstitutional. Neither would it be fair, even if we waive the constitutional inhibition for argumentative purposes, because there are hundreds of New York and Philadelphia men who have summer homes at some one of the many resorts of worldwide reputation, along the New Jersey shore of the Atlantic, in which their families spend from four to eight months of each year, and to and from which they make

daily trips in high power automobiles. They enjoy the trips from city to seaside in the evening and from shore to business in the morning by automobile vastly more than making the journey twice a day by boat or train. Besides, the trip can be made at any time and the owner need not bother about time tables or schedules and has only his own convenience to suit. He uses the excellent roads of New Jersey probably more than the automobilist who lives on or adjacent to those same roads and the State holds that it is but just and equitable to exact from him a license fee to be used for the up-keep of those roads."

THE MOTOR WORLD

Speaking of automobile legislation in general, Commissioner Smith expressed the opinion that as yet it is in an embryonic state throughout the country and said that eventually the whole subject will be regulated satisfactorily for all concerned. "I am of the belief," he said, "that we are as yet merely feeling our way toward the proper and generally satisfactory laws which will eventually result. They can not come in a day, nor at the very beginning, because various propositions must be tried out in a practical way before their strong or weak points can be determined and necessary amendments or corrections agreed upon. As the head of the State department having direct charge of the matter, I am ready at any time to give anyone an opportunity to take up any part of our automobile laws, either in court or otherwise, for the purpose of a test or to determine whether there is any injustice being caused or whether unfairness for or against the automobile interests can be shown. As an evidence of that I will cite briefly the fact that some time ago Mr. Yellott, a Baltimore lawyer, who is one of the quartet which handles the law business for the American Automobile Association, began an action in behalf of an automobilist of another State to test the power of attorney provision of the New Jersey law, which has been the subject of so much discussion, adverse and otherwise. My department prepared to meet the action and to carry it to an issue. in a thoroughly friendly spirit and with the idea that a legal adjudication of the matter would be a good step forward in the clearing of the atmosphere. I was really pleased that the action had been begun. You can therefore imagine my surprise when it was suddenly dropped and no explanation was offered for the change of front. I wish you would let it be known that no one need have any fear of offending the State authorities or the department of automobiles in particular by bringing any legal action directed against any part of our automobile law. We will welcome it in a friendly spirit and though we will, of course, put up the stiffest legal fight we know how, it will be entirely with the idea that adjudication of any part or all of the law by some competent court will be the means of showing us the right road to travel along the line of legislative regulation of automobile matters."

Jersey Senator's New Automobile Measure to be Vigorously Opposed—Features that Provoke Antagonism.

FLELINGHUYSEN FACES A FIGHT

Doubtless the ears of Senator Joseph Frelinghuysen, New York corporation lawyer and New Jersey legislator, burn, but as the insurance senator is used to this sort of thing he probably doesn't mind in the least the mean things automobilists are saying about him. The Frelinghuysen amendments to the Frelinghuysen automobile law as applied in New Jersey, which were introduced in the legislature of that State last week, have provoked more comment and more criticism and have placed the New Jersey senator more glaringly in the limelight than when his original bill was introduced more than a year ago.

That the proposed amendments to the present New Jersey law will not be passed without a strenuous fight on the part of the allied automobile interests goes without question. The New Jersey State Automobile Dealers' Association, in a meeting in Newark, Thursday afternoon last, fired the opening gun of the campaign to be waged against the proposed amendments by passing a resolution condemning them, and voting to circularize every automobile and accessories concern in the State, in an effort to arouse sentiment against the changes in the law now suggested by Senator Frelinghuysen.

Briefly summarized the proposed amendments consist of a sliding taxation of vehicles based upon horsepower, from \$3 to \$100 per year; a sliding scale for drivers' licenses, from \$1 to \$25; the granting of "admission tickets" to out of State motorists to use New Jersey's roads, at a cost of 50 cents per six days, and the abolition of manufacturers' and dealers' blanket licenses, besides a few minor changes.

This last provision is what the dealers in New Jersey object to. The present law compels the dealer to pay a license fee of \$20 a year, which permits him to operate five cars. The amendments of Senator Frelinghuysen will, if they become a law, compel the dealer to pay a separate tax on each car. Another apparent injustice is that according to the proposed amendments it would be possible for a dealer from another State to go into New Jersey and demonstrate cars for the small sum of 50 cents, while it would cost the New Jersey dealer a large sum for each car.

A general meeting of dealers from various parts of the State will be held some time during the present week, when it is expected that a plan of action will be decided upon. In the meantime the associated clubs of New Jersey are arranging for a meeting to be held with the same object in view.

FINED FOR CARRYING TWO NUMBERS

Nice Point in Construction of Massachusetts

Law—Local Garage Man Broke It

by Trying to Obey It.

One of those complications that result from inability to master the intricacies so frequent in automobile laws furnished a case for Judge Parmenter, of the Boston Municipal Court one day last week. John P. Ware was arrested on a charge of unlawfully operating an automobile on Columbus avenue. The basis of the charge was that the machine carried two numbers. Ware showed to the officer his license to drive the car under one of the displayed numbers, and explained that he was employed at a garage where the car had been repaired, the purpose of his operating it at this time being to test the repairs. Nevertheless, he was haled before the magistrate.

In court it was shown that the license exhibited to the officers by Ware was the one supplied to him by his employer, who was present in court to explain the situation. It appears that while the law grants a single license to a garage for all cars belonging thereto, this license does not cover cars sent in for repairs. The complication appeared to arise from the contention on the side of the prosecution that Ware should have had two licenses, corresponding to the two different numbers on the car he was operating. The garage proprietor had not thought this necessary, but he had thought it necessary, under the circumstances, for the car to carry both the owner's and the garage number. The decision of the case turned, however, on the declaration of the policeman that the arrest was made because of inability on the part of the policeman to decide, when a car came along with two different numbers, as to its ownership. Judge Parmenter took this view of the matter and fined Ware \$10 for not having a license corresponding to the owner's number.

Bicyclists as "Chaperons" for Motorists.

In common with the British Motor Union. the Association Général Automobile, of France, has established a body of cycle mounted scouts to protect the interests of its members by warning them of the danger of arrest for violation of any of the special regulations governing motoring practices. Instead of following the tactics of their over-channel brethren, who em ployed the scouts to warn motorists of the presence of speed traps, the new corps of the French association are instructed to patrol the streets and warn members of any infringement of the law, such as driving cars with smoking motors, or exceeding the speed limit. Their influence is thus directly in line with the purpose of the law. The force at present employed consists of

twelve men, suitably uniformed and mounted on bicycles, who are patrolling the principal streets and boulevards of Paris.

Minneapolis Reduces Renewal Fee.

Automobilists and motorcyclists in Minneapolis will hereafter be required to renew their licenses each year, but they will be charged only 50 cents for each renewal, if the ordinance under consideration by the Minneapolis city council succeeds in passing, and the indications are that it will. When the ordinance first was proposed several weeks ago it required that motor vehicles be licensed annually at the fee of \$2 as provided by State law. It was referred to the ordinance committee, a change resulting as stated. Licensees will be given the opportunity of taking the same number each succeeding year upon payment of the fee of 50 cents after the first year. Minneapolis motorists will have to carry two tags, one of the State and the other issued by the city. The latter will be distinguishable as they will contain the name, "Minneapolis" in addition to the number of the license and the year of issuance, a "very little" to place on one tag.

New York's Two Toll Gates Doomed.

Action toward the abolition of the only two toll gates left in New York State was taken by the Board of Supervisors of Erie county last week, when it adopted a resolution asking the county attorney to inform the board what legal steps can be taken to get rid of these two gates. The two gates are in Buffalo. County Engineer Diehl thought it high time that "these two ancient obstructions to traffic are removed." and said: "We cannot improve these roads under the good roads law as long as the toll gates remain upon them. I understand they are the only toll gates left in the State. This form of taxation on traffic is obsolete and should be ended in Erie county."

Piling on the Taxation.

Assemblyman Eagleton, of New York, has again presented in the legislature his two pet bills, which died a peaceful death during the last session. One provides that "no license shall be issued for an automobile in excess of 20 horsepower unless it is to be used for speeding or racing purposes"; the other gives a person who has been injured by an automobile, through the negligence or carelessness of the operator, a lien on the car until the claims for damages have been settled. On the same day Assemblyman A. E. Smith proposed that hereafter the tax on automobiles used for pleasure shall be \$2.50 per seating capacity.

If ever the New York to Paris racers reach Siberia, a surprise is in store for all but one of them. The one is question is carrying with it flanges to fit its wheel rims and a permit from the Russian government to run the automobile across the country on the tracks of the Trans-Siberian railway.

FOR A ROAD THROUGH THE ROCKIES

Plan to Petition Congress for a Thousand Mile Highway—Western Business Men in an Organized Movement.

In return for the millions of dollars paid in taxes for river and harbor improvements in America, the business men of four western States will petition the next Congress to appropriate \$10,000,000 for a road, 1,000 miles long, to be built from Yellowstone National Park to the Grand Canon of the Colorado river in Arizona.

This gigantic project was launched at a recent meeting of the Denver Real Estate Exchange, but the details were kept secret until last week. Harold Kountze has been named as treasurer, and another prominent western business man, it is stated, will be elected president of the Western Highway Association, by which name the organization which will work for the appropriation is to be known.

Colorado, Utah, Wyoming and Arizona will be asked to assist in the campaign for the road. The originators believe they will receive all the assistance necessary, as assuring letters already have been received from prominent men in these several States.

None of the States through which the proposed highway is to pass has sufficient finances to build it, but as it will be a great highway for travelers generally, it is argued that the road will prove of more importance than some of the inland harbors upon which vast sums are expended and from which the majority of westerners receive no apparent benefits.

While the plans of the organizers have not definitely been decided upon, it is the general opinion that Congress will be asked to donate the cost of building and maintaining and to establish a toll system which will repay the government for its expenditure. The proposed road will traverse some of the most famous scenic and historic spots of the Rocky Mountain region, including cliff dwellers' villages and at least one Indian reservation. As such a highway would attract countless tourists and result in consequent expenditure of money in the States named, it would therefore be of inestimable value to these States, not counting all the other advantages from well kept highways.

Placing Signs in the Ohio Valley.

A vote to purchase road signs, which the county commissioners have agreed to place, was the most important work of the Ohio Valley Automobile Association at its annual meeting in Wheeling, W. Va., last week. The report of the treasurer showed a balance of \$275, which will be expended in signboards and work of a similar character.



The Week's Patents.

873,325. Spring for Vehicles. Patrick J. McGinn, Salisbury, Rhodesia. Filed Aug. 7, 1906. Serial No. 329,549.

A vehicle provided with heavy leaf main springs by which the body or bed is supported when weighted, and light supplemental springs connected with the front ends of the main springs and with the body or bed work by means of plates having downwardly curved portions over which the supplemental springs are passed, said plates being also provided rearwardly of said downwardly directed curved portions with keepers through which the supplemental springs are passed, and the rear ends of the main springs being also provided with supplemental springs connected therewith and with the body or bed work of the vehicle.

873,329. Vehicle Spring. Gustav Schmitt, Milwaukee, Wis. Filed March 18, 1907. Serial No. 363,091.

1. A vehicle spring comprising oppositely bowed springs connected together in the center, links connected to the ends of one of said springs, and rollers connected to the ends of the other spring and mounted to move in said links.

873,372. Intake Device for Explosive Mixtures in Vapor Engines. Clarence P. Hollister, Pittsfield, Mass., assignor to Stilson Motor Car Co., Pittsfield, Mass., a Corporation of Massachusetts. Filed Oce. 4, 1907. Serial No. 395,844.

1. A vapor mixture intake device for a six cylinder engine comprising three intake groups of two each, a single intake to each group, a continuous chamber into which the several single intakes open, a general chamber connecting at its respective ends with the said continuous chamber and a single pipe connecting centrally with the general chamber.

873,384. Radiator. Elmer L. Ogle, New York, N. Y., assignor to N. Leroy Otis, New York, N. Y. Filed Oct. 8, 1906. Serial No. 337.887.

1. A cooler comprising polygonal tubes having a longitudinal seam on one flat side provided with a rectangular enlargement at one end only and grouped alternately so as to leave spaces between such tubes, substantially as described.

873,385. Radiator. Elmer L. Ogle, New York, N. Y., assignor to N. Leroy Otis, New York, N. Y. Filed Jan. 7, 1907. Serial No. 351,095.

1. Steel radiator tubes adapted to be united by solder; tinned at the points where they are to be soldered, in combination with a superimposed coat of copper overlaying the tube including the tinned surfaces.

873,392. Carburetter. Albert E. Stokes, Dallas, Texas. Filed Feb. 7, 1907. Serial No. 356,204.

A carburetter consisting of a mixing chamber, an oil inlet pipe opening into said chamber, a hollow spreader within the chamber having a concave face upon which the oil drops, a tubular stem supporting said spreader and communicating with a source of heat, a valve in the oil inlet pipe, a passage connecting the mixing chamber and engine, a valve adapted to close said passages, and means connecting the valves so they will be simultaneously operated, said means being adjustably connected to the valve in the oil inlet, for the purpose described.

873,399. Combined Heating and Ventilating System for Automobiles. Nathan W.

Williams, Evanston, Ill. Filed Nov. 2, 1906. Serial No. 341.737.

1. In combination with the structure to be heated, a hydro-carbon engine, an exhaust pipe leading therefrom, a muffler secured to the discharge end of the exhaust pipe and in open communication with the atmosphere, an inclosing box, secured to the structure to be heated and provided with an intake opening for supplying fresh air, a register in communication with the inclosing box for controlling the flow of heated air therefrom, a radiator box within the inclosing box, a branch pipe leading from the radiator box to the exhaust pipe intermediate the muffler and the engine, and a discharge pipe, leading from the radiator box and out of the inclosing box and discharging directly into the atmosphere, substantially as described.

873,405. Automobile. Franz Bartl, New York, N. Y. Filed Nov. 30, 1906. Serial No. 345,589.

1. A motor vehicle or automobile in which the actuating mechanism is located within the chassis frame comprising a drop axle with a stump on each end passing through the hub of a wheel, borings in said stumps, a wheel shaft in each boring, a ball bearing on each side of the wheel on the axle stump, a fourth ball bearing at the inner end of each shaft, and a standard bolted to the drop axle supporting the last named ball bearing and the inner end of the shaft.

873,434. Motor Car. James T. Hepburn, Lochwinnoch, Scotland. Filed Nov. 20, 1906. Serial No. 344,299.

1. In a motor car the combination with the front axle of a motor pivotally supported thereon, gear for driving the back axle, a shaft directly connecting said gear with the gear of the motor, a tube surrounding said shaft, a second tube arranged outside of the first one, the one tube being fixed at its front end and free at its rear end, while the other is fixed at its rear end and free at its front end in order that the wheel axles may take up different angles relatively with one another and to the horizontal.

873,453. Folding Seat Frame for Automobiles. James M. Nolan, New Haven, Conn., assignor of two-thirds to William H. Wilson and Charles Rasmussen, New Haven, Conn. Filed Aug. 23, 1907. Serial No. 389,-848.

1. A folding seat frame for automobiles consisting of a bracket having outwardly extending slotted guides and transverse and longitudinal grooves, a seat spider having inwardly extending arms and fingers, a rod connecting said fingers and extending through the slots in the frame, one of said fingers adapted to ride in said grooves, substantially as described.

873,461. Change Speed Gear. Maurice Sizaire and Louis Naudin, Puteaux, France, assignors to Société des Automobiles Sizaire et Naudin, Paris, France. Filed Feb. 28, 1906. Serial No. 303,443.

1. A change speed gear for motor cars, motorcycles, and like comprising a driven axle, a toothed wheel secured upon said axle, a driving shaft having a universal joint, a number of change speed pinions capable of sliding on the said driving shaft and driving the said toothed wheel, means for moving laterally said universally jointed shaft to disengage said pinions from said wheel and for sliding longitudinally the number of pinions when these pinions have been disengaged from with the toothed wheel.

873,478. Lubricating Device for Automobiles. Frederick J. Ziegler, New York, N. Y. Filed April 2, 1907. Serial No. 365,965.

1. In a lubricator, the combination of a container for the lubricant, a shaft which controls by its angular position the discharge of lubricant from said container, a shaft journaled in said container and arranged for operative connection with the engine to be lubricated, and an operative connection between said shafts by which the discharge controlling shaft is rocked.

873,544. Automobile Bumper. Ray W. Harroun, Chicago, Ill. Filed March 29, 1906. Serial No. 308,683.

1. In an automobile bumper, a rail extending across the front of an automobile attached to the frame by horizontal arms running through the eye bolts at the frame ends and supported by brackets at the rear ends backed up by springs surrounding said horizontal arms.

873,620. Motor Vehicle. William C. Schwarz, Edwardsville, III. Filed May 29, 1906. Serial No. 319,358.

1. In a motor vehicle, a frame, front and rear axles pivotally mounted at their centers beneath the frame, traction wheels fixed on the ends of said axles, differential gearing arranged on the axles, pinions meshing with and driving said differential gearings, flexible extensible shafts arranged to drive the pinions, means carried by the frame for driving the flexible extensible shafts, a pair of cross rods pivotally connected at their ends to the ends of the axles, a rod pivotally connected to one of the cross rods, and means arranged on the frame for imparting longitudinal movement to the rod.

873,679. Band Brake. Frank O'Brien, Jackson, Mich., assignor to Buick Motor Company, Flint, Mich. Filed Dec. 18, 1906. Serial No. 348,431.

1. In a brake of the kind described, the combination of a wheel carrying a ring, an axle connected to the wheel, a tubular casing over the axle, having a circular head at the end fitting at its edge close to the ring, with a series of pins and a stop projecting into the ring, a split band supported upon the pins, with its ends arranged to abut the stop, and means to expand the band.

873,738. Vehicle Tire. John Eckhard, Buffalo, N. Y. Filed April 7, 1906. Serial No. 310,554.

1. A tire for wheels comprising a retaining member held to the felly of the wheel, a multi-part tire within said retaining member and each of the parts thereof having curved undercut grooves in the ends thereof, combined connecting and fastening devices between the several parts of the tire comprising each a crescent-shaped transversely disposed connector fitting the grooves in adjacent ends of two adjoining blocks and fastening bolts on said connector passing through said retaining member and the felly of a wheel.

873,764. Motor Starter. Adolph W. Manz, Chicago, Ill., assignor to Paul H. Manz, Chicago. Ill. Filed Dec. 24, 1906, Serial No. 349,356. Renewed Nov. 4, 1907. Serial No. 400,548.

1. A motor starter, including a lever, a ratchet wheel removably mounted upon the motor shaft, a pawl attached to said lever, a plurality of rock-bars mounted on said lever and having flexible connection with each other and with said pawl, means for operating the lever, a dog adapted to engage the said ratchet wheel during the reverse move-



ment of the lever and means for holding the said dog out of engagement with the rat-chet wheel when the said lever is in its initial position.

873,841. Vehicle Wheel. Charles E. Cole, Cleveland, Ohio. Filed Dec. 26, 1906. Serial No. 349,423.

1. In a vehicle wheel, the combination with a pair of annular outer plates, of a shaft to which said plates are secured, a ring also secured to said shaft, said ring having a concaved outer periphery, a sec-ond ring surrounding the first named ring, said second ring having a concaved inner periphery, hollow rubber cushioning balls located between said rings, and plates se-cured to the outer ring which overlap the inner ring and which are entirely covered by the outer plates, openings formed in the plates that are carried by the outer ring, and projections carried by the outer plates which extend into said openings, said openings being larger than said propections.

873,903. Transmission and Speed Changing Mechanism. Eugene Schmidt, Stillwater, Minn. Filed Oct. 28, 1905. Serial No. 284,816.

1. Apparatus of the class set forth, comprising a suitable frame, engines mounted upon said frame, a drive shaft and transmitting mechanism, comprising fly wheels drive faces, a frictional drive wheel in continuous peripheral contact with each of said faces, a sleeve feathered and free to slide on said shaft upon which sleeve said fric-tional drive wheel is journaled, a clutch be-tween said sleeve and frictional drive wheel, means for sliding said sleeve to move said drive wheel across the faces of said fly

wheels, and means for throwing said clutch into and out of operation.

873 910 Friction Clutch. Edmund Sprung, Detroit, Mich. Filed April 20, 1907. Serial No. 369,299.

1. In a clutch, the combination of a friction disc or member having a smooth contact surface, a second friction member formed from a disc consisting of segments yieldingly held with their friction surface in different planes but registering with each other, and means for moving said second friction members into the same plane and into frictional contact with the other mem-

873,911. Vehicle Wheel. Harold M. Starley, Coventry, England. Filed Sept. 18, 1906. Serial No. 335,124.

1. In road vehicle wheels, the combination consisting of a hub ring having circumferential seating apertures therein, screwed locking bolts seated within the said driving studs secured to the wheel rim, and tubular metal spokes in engagement at their respective extremities with the said locking bolts and driving studs, as set forth.

873,926. Longitudinally Displaceable Car Body for Motor Vehicles. Rudolf Diesel, Munich, Germany. Filed Jan. 25, 1907. Serial No. 353,957.

In a motor car, a longitudinally displacethe vertical transverse plane passing through its center of gravity, said rolls being swingingly or otherwise movably mounted on the car body for enabling a lifting of the car body from the frame, and catch pieces mounted on the rear end of the

under framing and arresting the rolls when the car body, after having been displaced, is tilted towards the rear side.

873,957. Vehicle Tire. George A. Parse, Jr., New York, N. Y. Filed March 9, 1907. Serial No. 361,474.

1. In a vehicle tire, the combination of circular rim consisting of U shaped sections having an elastic outside covering of a ring adapted to be mounted on the felly, means for securing the ring to the felly, and elastic blocks interposed between the ring and the U shaped sections comprising the ring, substantially as described.

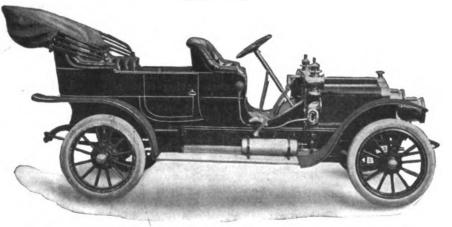
873,968. Electric Spark Plug. Frederick B. Thatcher, Providence, R. I. Filed Jan. 31, 1907. Serial No. 355,035.

1. In a spark plug, an outer shell having one end formed with screw threads on its interior and its opposite end formed with screw threads on its exterior, a shoulder formed on the interior of said shell inter-mediate its length, an outer core member extending in one end of said shell, and havaround said outer member engaging said interior threads and abutting said lip, an inner core member extending within the other end of said shell and having a lip en-gaging said interior shoulder of the shell, the outer portion of said last named end of shell being enlarged on its interior, a spark-ing point rod extending through said core members, a sparking point on said rod projecting into said enlarged interior of the shell, a collar on said rod to the rear of said point abutting said inner core member, said end of the shell surrounding the inner core member being formed with two oppositely disposed openings which expose said





Model 28



Five Passenger Touring Car \$2000 Three Passenger Runabout \$2000 AN ATTRACTIVE CAR AT AN ATTRACTIVE PRICE SPECIFICATIONS

Engine—4 cylinders, 4½x4½, 28-30 brake horsepower.
Transmission—3 speeds forward and reverse, selective, Timken bearings.
Wheel base—109 inches; tread, standard; clutch, cone leather.
Body—sheet metal, straight line type, roomy and comfortable.
Tires—32x3½, quick detachable; make optional.

Frame—pressed steel, 4¾ inches deep. Front axle—single I-beam drop forging, ball bearings. Rear axle—bevel gear drive, enclosed type, roller bearings. Ignition—synchronized jump spark. Weight—empty, 2,200 lbs. (actual, not catalogue).

Represented in Greater New York by

THE PALMER & SINGER MANUFACTURING COMPANY, 1620 BROADWAY SELDEN MOTOR VEHICLE COMPANY, Rochester, N. Y.

Members A. L. A. M.

AGENCIES WANTED IN UNOCCUPIED TERRITORY.





sparking point, and a wire terminal secured to said last named end of the shell at right angles to said openings thereof.

873,978. Clutching Device Adapted for Use in Communicating Rotary Motion and in Controlling the Transmission Thereof. Frank Bailey and Frederick H. Jackson, London, England. Filed Dec. 27, 1906. Serial No. 349,686.

1. In hydraulic clutch mechanism of the character herein referred to, the combination, with an eccentrically formed casing or chamber and a disc formed with radial slots in which slab-like pistons slide, of a packing plate interposed between said disc and one wall of said chamber, and passages formed in said wall and leading from said plate to a controlling valve, whereby the liquid under pressure is admitted to the back of the plate, substantially as and for the purpose set forth.

874,075. Variable Speed Transmission and Reversing Gear. William S. Hovey, Three Rivers, Mich., assignor to Sheffield Car Company, Three Rivers, Mich. Original application filed Oct. 18, 1906. Serial No. 339,534. Divided and this application filed Jan. 16, 1907. Serial No. 352,645.

1. The combination with an engine crank shaft, of a transmission gear, comprising a driving transmission shaft connected to said engine crank shaft by a universal joint; gears arranged on said driving transmission shaft, said gears being fixed thereto, and said gear being revolubly mounted thereon; a clutch for securing said gear to said shaft; a transmission shaft; gears arranged on said transmission shaft to mesh with said wears respectively, said gears being revolubly mounted on said shaft and said gear being fixed thereon; a clutch mechanism for securing said gears to said shaft; a beveled gear on said shaft; a driven shaft; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said beveled gear on said shaft; and a clutch mechanism by which either of said gears on said driven shaft may be connected thereto, substantially as described.

874,114. Lubricator. Johannes T. Pedersen, Woodside, N. Y., assignor to Pedersen Manufacturing Company, New York, N. Y. Filed Feb. 21, 1907. Serial No. 358,545.

1. In a lubricating device and in combination, a series of oscillating cylinders, a series of reciprocating and oscillating pistons within said cylinders, means for simultaneously moving the said cylinders, and pistons, a power device for actuating the same, a body frame serving as a support for the said cylinders and means for conveying the oil to and from the respective ends of the cylinders and pistons with the movement of the pistons.

874,119. Roller Bearing. James E. Sackett, Sparrow Bush, N. Y. Filed June 8, 1907. Serial No. 377,971.

1. In a roller bearing, the combination of a shaft or axle, a casing having a circular series of spoke sockets and abutments at the inner ends thereof and also having smooth bores at its ends and annular abutments at the inner ends of said smooth bores, bearing rings arranged side by side within the circular series of spoke sockets an annular toothed recess, means connected an annular toother recess, means connected with the walls of the spoke sockets for detachably retaining said bearing rings in position, bearing rings arranged side by side in the end smooth bore of the casing and forming annular smooth grooves and

annular toothed recesses, bolts detachably connecting one set of the latter bearing rings with the adjacent abutment of the casing, bolts detachably connecting the other set of the latter bearing rings to the adjacent abutment of the casing, sleeves detachably secured on the axle, within the casing, and forming circumferential grooves and circumferential toothed recesses, and three sets of anti-friction rollers interposed between the bearing rings and the sleeves and having smooth portions disposed in the opposed smooth grooves of the rings and sleeves and toothed portions arranged between and engaging the teeth of the rings and sleeves.

874,289. Circuit Closer for Explosive Engines. Thomas A. Bemus, Boston, Mass., assignor to T. Alton Bemus Company, Incorporated, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 2, 1905. Serial No. 281,054.

1. The herein described circuit closer comprising a sleeve, a plug of insulating material carried by said sleeve, a casing mounted on and movable relative to said sleeve, a primary brush, a carrier therefor also mounted on said sleeve, a secondary brush carried by said plug, a secondary contact in engagement with said secondary brush, primary contacts mounted in said casing and with which said primary brush is designed to engage, secondary terminals also mounted in said casing in proximity to the plane of movement of said secondary brush, and a secondary binding post in engagement with said secondary contact.

874,388. Clutch. Thomas J. Butler, Harrison, N. J. Filed Jan. 24, 1907. Serial No. 353,913.

1. A clutch comprising a driving cone, a driving shaft connected with a portion of said cone, a shaft to be driven, said shaft being normally disconnected from said driving cone and said driving shaft, a positive clutch disc, and a series of independently acting friction-cones, all arranged to be successfully operated for producing a combined active engagement of said clutch disc and said friction cones, and each friction cone receiving its maximum amount of thrust before the next following cone section is brought in operative contact, substantially as and for the purposes set forth.

Maxiell"

Let me send to you the new Maxwell catalogue, which is one of the few catalogues that really tells things. Let me give you the name of the Maxwell representative in your locality. He will be glad to give you a demonstration or refer you to Maxwell owners.

MAXWELL-BRISCOE MOTOR CO.

Members A. M. C. M. A.
P. O. Pox 106 Tarrytown. New York

THE METEOR SO H.P.

For Particulars, Address does things

METEOR MOTOR CAR CO., Bettendorf, Ia.

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order In capitals, 25 cents per line.

POR SALE—No. 14 sliding gear transmissions; 90 bodies, primed only; 75 bodies, painted only; 72 bodies, painted and trimmed; 69 sets bevel drive axles and hubs; 130 frames, unassembled; 30 frames, assembled; 35 radiators; 50 tanks; 59 two-cylinder opposed engines, 5½5; 105 sets springs; 48 mufflers; 98 sets universal joints; 47 steering wheels, 14-inch; also various quantity of other parts, all suitable for 2,000 pound touring car or runabout. RANDS MFG. CO., Detroit, Mich.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

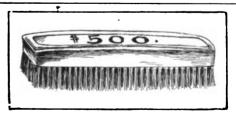
FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.



Continental Ready-Flated Tires.

they reduce tire expenses.

CONTINENTAL CAOUTCHOUC COMPANY
43 Warren Street, New York City.
"Keep your eye on Continentals"



Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

MOTOR MAKERS



made the motors in some of the most successful cars, for Quality before price, and BOTH right.

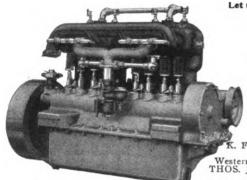
The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908

THREE SIZES

THREE SIZES

4½ in. x 4½ in.
4½ in. x 5 in.
5 in. x 5 in.
5 in. x 5 in.
4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.
Our new factory and machinery enable us to guarantee quality and deliveries. Also clutches and transmissions. Send for catalogue.

Grill Rooms

Transmissions. Send for catalogue.

K. FRANKLIN PETERSON, 166 Lake St., Chicago, Ill. Western Representative
THOS. J. WETZEL, 29 W. 42d St., New York. Eastern Representative.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.



HOTEL TULLER

New and Absolutely Fireproof.

Adams Ave. and Park St., DETROIT, MICH.

Automobile Headquarters

In center of Theater, Shopping and Business district. Club Breakfast, 40c. up Table De Hote Dinner, 75c Luncheon, 50c

A la Carte Cafe

EVERY ROOM WITH BATH-Rates \$1.50 per Day up. M. A. SHAW, Mgr.

L. W. TULLER, Prop.

KINWOOD AUTOMOBILE PARTS.

OUR LEADERS:

Kinwood Perfection Radiators

Kinwood Mechanical Oilers.

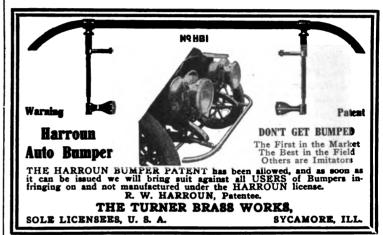
KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc. Large facilities and dependable deliveries.

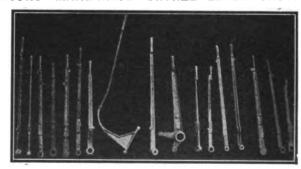
K. FRANKLIN PETERSEN. 166 Lake St., Chicago, Western Representative.

THOMAS J. WETZEL 11 Warren St., New York, Eastern Representative.

THE KINSEY MFG. CO., Dayton, Ohio.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



& SONS SHIP THE WILLIAM CRAMP Philadelphia, Penna. BUILDING COMPANY,

IF YOU ARE INTERESTED IN MOTORCYCLES

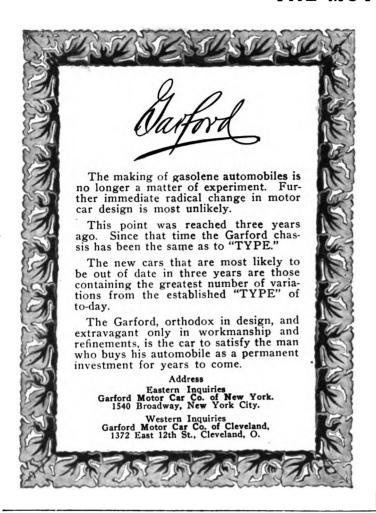
The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

\$2.00 Per Year

Specimen Copies Gratis









Splitdorf Ignition

Has Attained National Repute **Because of Unquestioned Merit**

The confidence in SPLITDORF Ignition that has made this business the greatest of its kind is rooted in Splitdorf

C. F. SPLITDORF

Walton Ave. & 138th St. **NEW YORK**

Triumph Grease, What Is It?

III is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. ¶We do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. ¶It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. ¶A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewthrough using it. ¶It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. ¶Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company. South Bend, Ind.

A NEW SENSATION

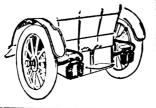
Equip your car with

Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Ce. 4555 Delmar Ave., St. Louis New York Branch, 52 West 67th Street

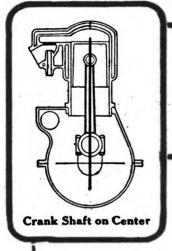


RAJAH" SPARK PLUCS

IGNITION ABSOLUTELY SURE

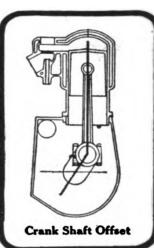
RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



Rambler

Why the Offset Crank Shaft



One of the greatest improvements in motor construction is the offset crank shaft. Its advantages are positive and direct.

First—By practically eliminating the dead center the efficiency of the motor is greatly increased through the greater leverage and more direct thrust from piston to crank shaft.

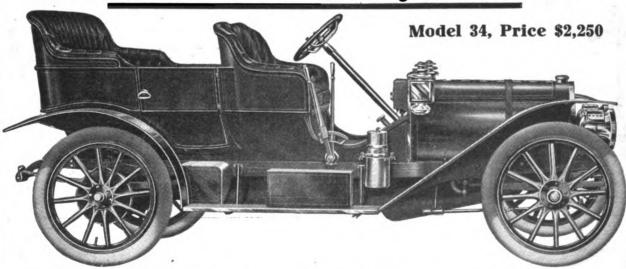
Second—Increased life of the motor through reduction of side thrust on cylinder walls and consequent saving in wear.

Third—Reduction in vibration and increased steadiness of running through more direct application of power generated in the cylinders.

Like many other fundamentally good features this must be done right and in the Rambler it is right both theoretically and practically and the result is a motor that combines the highest degree of efficieny with long life and economy of operation.

It is this and other features of equal value that make

The Car of Steady Service



This four cylinder chassis, equipped both as a 5-passenger touring car and 3-passenger roadster. Price of each style \$2,250. The Rambler Utility Car with double opposed motor, \$1,400.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

Branches and Distributing Agencies:

Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

Representatives in all leading cities.

Volume XVII.

New York, U. S. A., Thursday, February 27, 1908.

No. 22

RECEIVER FOR THE RELIANCE

Detroit Truck Manufacturers Forced to the Wall—Expect to Pay All Claims and Reorganize.

On petition of the Union Trust Co., trustee, Victor N. Gurney was, on Monday last, 24th inst., appointed receiver for the Reliance Motor Car Co., Detroit, whose plant is closed. Gurney gave bond for \$25,000. This, it is announced, is one step toward the reorganization of the company with a larger capitalization. All creditors and stockholders, it is declared, will be taken care of.

The Reliance Motor Car Co. was incorporated in 1904 with \$400,000 capital, and of late has been engaged almost wholly in the production of commercial vehicles. The company had authority to issue \$150,000 bonds, of which \$130,000 were sold and \$20,000 remained in the treasury. The Union Trust Co. was trustee under a mortgage to secure the bonds.

There are several large claims against the company and one foreign company has begun an action to collect. The directors declared in court that a sale of the property by the receiver at this time would result in creditors losing half their claims, while with the reorganization they could be taken care of and the concern put upon its feet.

A circular issued to the creditors by the board of directors after the appointment of the receiver, says:

"A sale to such a new organization will enable the creditors to derive benefits from the business of the new company, and will continue the manufacture of Reliance trucks. The outstanding bonds, under the mortgage, amount to \$130,000, there being \$20,000 of bonds remaining in the treasury. The holders of the bonds outstanding, desiring, if possible, to preserve the good will of the enterprise, and believing that more will be realized by such a plan than through a forced sale by receiver, have been pre-

vailed upon to permit their former offer to stand, providing for the issuance of the remaining \$20,000 of bonds to be placed in the hands of Frank G. Smith, cashier of the First National Bank, of Detroit, Mich., as trustee, as security to the creditors, provided that within ten days they all agree to accept said security, and authorize Frank G. Smith, as trustee, to join with the present bondholders in disposing of the property to the best possible advantage.

"This will give the creditors a proportionate share of the proceeds of the property with present bondholders. If stock is received, it is confidently believed it can be readily converted into cash."

Dayton's Quick Recovery from Big Fire.

Fire which broke out in the trimming room of the Dayton Motor Car Co.'s plant at Dayton, Ohio, at 1 o'clock Friday morning, 21st inst., caused a loss of approximately \$150,000, which is fully covered by insurance.

What caused the fire is a mystery. Fed by the light nature of the stuff in the trimming department, the flames spread rapidly to the stock room wherein were stored bodies, trimmings, supplies, etc., and while the firemen did good work and confined the flames to the older of the two buildings which comprise the Dayton plant, the new concrete building was considerably damaged by water. Before the last engine had left the wreckage, however, the Stoddard-Dayton staff had moved its offices to the new concrete structure and was doing business the following day, when several shipments were made. While the loss is severe, it will not materially affect the operations of the company or delay deliveries more than two weeks, the company having risen to the occasion with characteristic enterprise.

Insurance Rates Raised in St. Louis.

Because of several recent fires, in one of which a loss of \$200,000 was involved, the St. Louis survey bureau has increased its rates on automobile garages, repair shops and factories. The increase ranges from 25 to 75 per cent.

SELDEN SUITS GIVEN NEW TURN

Judge Holt Rules that Judgments by Agreement do not Establish Validity—His

Far Reaching Opinions.

Litigation involving the Selden patent was given a new turn on Saturday last when Judge Holt, sitting in the United States Circuit Court for the Southern District of New York, handed down his decision in the suit of the Electric Vehicle Co. vs. the De Dietrich Import Co. and Walter G. Allen, who formerly was the active man in that concern, and who later became in terested in the importation of Mercedes cars and still later in the manufacture of the Allen-Kingston car.

The De Dietrich company, through Allen, secured a Selden license and when he began handling the Mercedes, he was promptly sued for infringement by the Selden interests, which suit he permitted to go by default. When he took up the Allen-Kingston car, the Electric Vehicle Co., as owners of the Selden patent, sought to have him punished for contempt in violating the terms of the decree and injunction entered at the time of the default. When contempt proceedings were instituted, Allen moved to have the default reopened.

This motion Judge Holt denies, at the same time defining the obligations entailed by the execution of such contracts recognizing patents and also pointing out very clearly why a judgment obtained by default is as binding as one secured in a contested case. The court holds, however, that as the Selden patent never has been declared a pioneer patent in a contested suit, and as no evidence was submitted to prove that the Allen-Kingston car is an infringement of the patent, he hesitates to punish Allen for contempt and accordingly denies that motion.

Judge Holt's interpretation of Judge Coxe's opinion, which has served as one of the main props of the Selden litigation. is

far reaching. In effect it says that a suit in which judgment is obtained by default or agreement does not establish the validity of a patent, but applies only to the particular parties to such proceedings. Judge Holt's opinion in full is as follows:

I think that the motion to open the default should be denied for the following reasons:

1. The term at which the decree was entered had expired before the motion was made. 2. The defendants were guilty of laches in making the motion. 3. No valid excuse is shown for the default. 4. The evidence satisfies me that the defendants, after full consideration, concluded to make no defense, and had no intention to move to open the default until after the motion to punish for contempt was noticed.

On the question whether the defendants have been guilty of contempt I have felt some hesitation. On the one hand, a final decree and an injunction issued pursuant to it should, in a patent case, as in all other cases, be effectively enforced. A decree pro confesso should be enforced just as effectively as any other decree. The fact that the defendant Allen, at first individually, and afterwards through the company which he had organized, took out licenses from the complainants authorizing him to import complainants authorizing him to import and sell in this country the De Dietrich machine affords a strong legal presumption that he admitted that the Selden patent was valid and that it covered the De Dietrich machine. The fact that, in consideration of obtaining such licenses, he executed contracts agreeing not to sell any gasolene automobiles not licensed by the complainants affords a strong presumption that he admitted that the Selden patent was a pioneer patent, covering all gasolene automobiles of the usual type. The fact that he permitted a decree to be taken against him by default, holding that he had infringed the patent by importing and selling the Mercedes machine, establishes as to him that the Mercedes machine is an infringe-ment of the Selden patent, and therefore, as to the defendant Allen, it may be a proper test, in order to determine whether the Allen-Kingston automobile infringes the patent, to compare it, not only with the patent, but with the De Dietrich and Mercedes machines. On the other hand, the fact that Allen suffered the decree to be taken by default strictly establishes only the truth of the facts alleged in the bill. He admits that he had imported a few Mercedes machines, and the fact that he permitted the decree to be taken in that case simply establishes that he had no defense to make to that charge. The decree did to make to that charge. The decree did not establish that the Allen-Kingston auto-mobile infringed the Selden patent. It did decide that Allen had infringed the patent by importing and selling the Mercedes ma-chines, and the decree thereupon enjoined him from doing anything to infringe the patent.

If, therefore, the Allen-Kingston automobile is obviously, upon mere inspection, an infringement of the Selden patent, the mointringement of the Selden patent, the motion to punish him for contempt in offering to sell it should be granted. The question whether it is obviously an infringement seems to me to depend upon the question whether the Selden patent is a pioneer patent or not.

If the Selden patent conveyed to the patentee a monopoly, in this country, of the right to make and sell any gasolene automobile of the usual types, then I think that the points of distinction alleged in the affi-davit of Mr. Smith are immaterial, but if the Selden patent is not a pioneer patent covering the entire fundamental principle

of the gasolene automobile, but simply is a patent for a particular kind of a gasolene automobile, I think it at least doubtful, in view of the grounds of distinction pointed out by Mr. Smith, whether the Allen-Kingston automobile infringes.

It is claimed that the opinion of Judge Coxe shows that he held the Selden patent to be a pioneer patent, and its language, at first reading, seems to tend to sustain that claim; but I think that the opinion of Judge Coxe should be read in the light of the real question before him, and I cannot see how the question of the absolute validity or invalidity of a patent can be determined upon a demurrer which is based simply upon the claim that the patent is void on its face. If the patent shows on its face that it is void, that fact may be determined upon a demurrer; but it seems to me that a decision upon such a demurrer upholding a patent cannot be conclusive on any defense which depends on extraneous proof as for instance, anticipation by earlier patents, or by inventions described in earlier publications, or by prior use, or any of the many defenses which may be set up to the validity of a patent which are not apparent on its face. I therefore cannot see how the decision of Judge Coxe upon the demurrer establishes conclusively that this patent is either a pioneer patent, or is valid, and admittedly there has been no decision rendered after a hearing upon the merits on proofs taken. Moreover, there are facts in this case which support the suggestion that the complainants have hesitated to bring such a question to actual decision.

The patent was applied for in 1879. was granted sixteen years later, in 1895. Nearly thirteen years have since passed, during which the complainants have as-serted that they had a pioneer patent, and have caused many persons to take out li-censes from them, and have collected, according to the motion papers, about \$1,-500,000 for license fees, without bringing to actual trial a case testing the question of the validity of this patent on the merits. Several such cases have been brought. One was a case against the Winton Carriage Company, in which the complainants took their prima facie proofs, and the defendant had nearly completed its proofs, when the case was compromised, and settled out of court. As early as 1903 suits were brought by the complainants against the Ford Mo-tor Company and the O. J. Gude Company, for the infringement of the Selden patent, and as early as 1906 suits were brought by the complainants against the Panhard Company. In all these suits defenses were interposed on the merits, but the testimony never has been completed, and the cases never brought to a hearing.

The claim put forth upon this motion is that the Selden patent is a pioneer patent, and that all makers of gasolene automobiles of the usual types infringe the patent. So serious a claim as this ought not to be upheld by the courts unless the complainants either have established the validity of the patents in a contest litigation, or have been ready to do so without delay whenever an opportunity has been offered.

If this motion is granted, it will be urged, as the decision of Judge Coxe on the demurrer has been urged, as an adjudication that the Selden patent is a pioneer patent, and that all makers of gasolene automobiles must have a license. I think, on the papers submitted, that there is sufficient doubt whether the Selden patent is a pioneer patent, and that, if it is not a pioneer patent, there is sufficient doubt whether the Allen-Kingston automobile infringes, to make it improper to grant this motion.

My conclusion, therefore, is that the mo-

tion to punish the defendants for contempt should be denied.

The Week's Incorporations.

Los Angeles, Cal.—Auto Machine Works, under California laws, with \$20,000 capital. Corporators not named.

Chicago, Ill.-Joseph B. McKeague Co., under Illinois laws, with \$5,000 capital; to make automobiles and accessories. Corporators-James B. Leahy, K. Neale and J. McCarthy.

Springfield, Mass.—Geisel Automobile Station, Inc., under Massachusetts laws, with \$5,000 capital. Corporators—George W. Cook, president; Adolf A. Geisel, secretary-treasurer.

Chicago, Ill.—Times Square Automobile Co., under Illinois laws, with \$5,000 capital; to deal in automobiles and accessories. Corporators-E. S. Hartman, W. D. Huff, and A. O. Beck.

Jersey City, N. J.-Walden W. Shaw Co., under New Jersey laws, with \$30,000 capital; to manufacture automobiles and other conveniences. Corporators-H. O. Coughlan, L. H. Gunther and J. R. Turner.

New York City, N. Y.—Hartog Auto Co., under New York laws, with \$15,000 capital. Corporators—Albert Hartog and Samuel B. Hartog, Cumberland Hotel; Albert Hartog, Jr., 347 West 54th street, New York City.

New York City, N. Y .- Noslip Tire Protector Co., under New York laws, with \$15. 000 capital. Corporators-Woolsey A. Shepard, Charles B. Young, and Augustus S. Houghton, 111 Broadway, New York City.

New York City, N. Y .- Van's Auto Tire Co., under New York laws, with \$10,000 capital. Corporators-Frank Van Tassel, 220 West 48th street; John Graham, 148 West 83d street, New York City; Frederick G. Hurst, Richfield Park, N. J.

New York City, N. Y.-Leakless Motor Tube Co., under New York laws, with \$40,-000 capital; to manufacture compound to stop or seal punctures in rubber tires. Corporators-S. K. Albright, E. S. Hopkins and C. H. Bennett, all of New York City.

Columbus, Ohio.—Columbus Garage & Machine Co., under Ohio laws, with \$20,-000 capital; to conduct garage and do general automobile business. Corporators-C. R. Hambleton, Fred M. Luchtenberg, C. S. Hasenzahl, O. L. Beathard and H. L. Thompson.

Steel Swallow Remains in Jackson.

The Steel Swallow Automobile Co., which intends to make light delivery wagons, has decided to remain in Jackson, Mich. The company received an offer to move to Hudson, but after considering the advantages of both places, chose to stay in Jackson. The stockholders have elected the following officers: President, F. W. Hahn; vice-president, Carl Eberle; treasurer, Louis F. Poor; secretary, D. N. Dearing; superintendent, W. L. Cummings.

ROYAL'S CREDITORS TAKE ACTION

Vote to Reorganize Company on Basis Suggested by Receivers—Plan Adopted and Committee Appointed.

As a result of the meeting of the creditors of the Royal Motor Car Co., held in the factory in Cleveland, Ohio, on Thursday last, 20th inst., it is practically assured that the company will be reorganized on the basis suggested by the receiver, that is, by capitalizing its indebtedness, the creditors accepting preferred stock in payment of their claims.

A resolution to this effect was adopted and a committee of seven creditors appointed to carry out the plans. The committee is composed of C. E. Adams, vicepresident and manager Cleveland Hardware Co.; B. W. Browne, president Great Western Oil Co.; H. E. Andress, representing Diamond Rubber Co.; William H. Foote, cashier Wyman & Gordon; S. F. Haserot, president Haserot Canneries Co.; H. H. Hill, secretary Cleveland Tanning Co.; H. S. Black, treasurer Ohio Brass Co.. The committee was given broad powers and has authority to proceed with the reorganization whenever it deems that a sufficient number of creditors has assented to the agreement.

The plan is to form a new corporation with \$500,000 of 6 per cent preferred stock and \$520,000 of common, \$100,000 of the latter to be termed bonus stock, and of which 25 per cent. will be presented to the managing director and the remainder to whomever he deems worthy of it. The voting power will remain with the preferred share holders until 50 per cent. of their holdings have been retired, when the power will be divided with the common stockholders. The exact plan as proposed is as follows:

- (a) A new corporation to be formed of the creditors to take over all the assets of the old company, the consideration of such transfer being the assumption by the new corporation of all the liabilities of the old company, and the issuance of common stock as hereinafter provided.
- (b) Issue preferred stock in said corporation to an amount not to exceed \$500,000, which preferred stock shall be preferred both as to assets and dividends, and shall be subject to 6 per cent. annual dividends, payable quarterly from and after April 1st, 1909. All preferred stock to be issued to present creditors in the manner hereinafter provided:
- (c) Issue common stock of the new corporation to the amount of preferred stock of the old corporation, four hundred and twenty thousand dollars (\$420,000), plus one hundred thousand dollars (\$100,000), to be used as bonus stock, as hereinafter described; common stock to be issued to the old company to said amount of \$420,000,

and the bonus stock to be divided when all of the new preferred stock shall have been retired, and the book value of the new com mon stock is par; such division to be as follows:

THE MOTOR WORLD

Twenty-five (25) per cent. to the managing director, and the balance to the others in the discretion of the managing director.

- (d) The net profits of the new corporation, after paying the dividends on the preferred stock, shall be applied to the redemption at par and accrued and unpaid dividends of the preferred stock; provided, however, that if the directors so elect, they may retain out of such net earnings as surplus, a sum not to exceed in the aggregate one hundred thousand dollars (\$100,000). Said preferred stock is to be redeemed from the holders thereof pro rata, but not in sums of less than one hundred dollars (\$100).
- (e) The voting power to be in the preferred stock, and the common stock to have no representation on the directory until fifty (50) per cent. of the preferred stock shall have been retired. The voting power then to be divided with the common stock, on a basis of four to one.
- (f) For all claims in excess of \$100, one share of said preferred stock for each \$100 of said claim, and one-half share of said preferred stock for each fraction of \$100 equal to \$50, and cash for fractional parts of \$50
- (g) For all claims for less than \$100 each, cash to the full amount thereof.

Dream Story of Packard's Purchase.

Because M. J. Budlong, a former president of the Electric Vehicle Co., Hartford, Conn., is about to become assistant general manager of the Packard Motor Car Co., Detroit, Mich., a fertile brain able to appreciate the stuff of which dreams are made, promptly set afloat a story that the Packard company would take over the bankrupt and idle Electric Vehicle plant and operate it as an Eastern factory. The report was printed in Hartford on Saturday last and raised false hopes in the breasts of hundreds of former employes of the Electric Vehicle Co. Four days later, the "news" reached that staunch European advocate and stock market booster, the New York Herald, which "featured" the rumor and added to it a few dreams of its own. Everything about the story is correct except the truth of it. The improbability of the Packard company's, or any other company's, purchase of a bankrupt plant which is weighted with nearly \$2,500,000 of bonds, to say nothing of other heavy obligations, should be apparent to any one not given to dreams.

The New York Herald also concocted a tale that the sale of the Pope-Toledo factory to the Dayton Motor Car Co. practically had been consummated. The tiny grain of truth in the tale is that when fire damaged the Dayton plant, the Pope people courteously wired the Dayton company placing the Toledo plant at their disposal.

TWO RICHMONDS IN THE FIELD

Each Otherwise Named the Philadelphia Taxicab Co.—Prospective Fight for Quaker City Franchise.

Two rival taxicab companies of the same name, but incorporated in different States. are to make a fight for the privilege of introducing in Philadelphia a system of registered cab service similar to that now operated in New York, according to advices from the Quaker City. Scarcely had the Philadelphia Taxicab Co., of Pennsylvania, whose charter was approved by the governor of that State last week, begun the work of organization, when the Philadelphia Taxicab Co., of New Jersey, made its appearance. The Pennsylvania corporation was formed by the Corporation Trust Co., an organization that makes a business of obtaining charters for persons in New York hiding behind the name of their counsel. As the name of the real incorporators in both companies have not been divulged, Philadelphia is awaiting developments.

Jeffery Buys His Old Chicago Factory.

It transpires that the man who purchased the former Rambler plant in Chicago from the receivers of the Pope Mfg. Co. is none other than Thomas B. Jeffery himself. The factory is an impressive brick structure on North Franklin street, and was built by Gormully & Jeffery when their Rambler bicycle was in its heydey. It was taken over by the "bicycle trust" and in sequence became a Pope possession. In it the first Rambler automobile was developed. The price paid by Mr. Jeffery was \$100,000. The plant was carried on the Pope books at \$250,000, which is close to its real value.

Witherbee Gets Broadway Location.

The Witherbee Igniter Co., now located at 541 West Forty-third street, New York, has leased a part of the third floor of the Motor Mart, 1876 Broadway, and is making ready to remove its factory and offices to that address. The new location will afford some 8,000 square feet of floor space.

Botto Again Visits the Coast.

W. M. Botto, sales manager of the Palmer & Singer Mfg. Co., is making an extended tour of the West and the Pacific Coast. As he is familiar with the country he reports that he had experienced no trouble in interesting the trade in the Simplex and the other P. & S. cars.

To Make Motor Buggies in Massachusetts.

W. A. Shafer, Frank Dodge and J. R. Graves, formerly of the Crown Automobile Co., Amesbury, Mass., have organized in that city the Crown Motor Vehicle Co. They will make high wheeled motor buggies.



An Unusual Proposition

ARE YOU AUTOMOBILE **DEALERS MAKING MONEY?**

If not, why not? Is it because your apparent profit is wiped out by after-sale contingencies? Is it because your business system is faulty, your methods disorderly and careless? Is it because you are located in a district where the line of cars you sell is not adapted or in demand? Is it because you are a skimmer, not doing the business seriously, as though you had no real place in business life? Is it because you consider the selling of automobiles a game rather than a business.

The fact that so large a number of retail automobile dealers are not making money, and I am happy to say that there are few Maxwell dealers among this class, is a matter of serious concern to those in the industry.

Now, you know me; you know that I must have a good deal of experience, that my plan of covering territory has been successful; that I know the business end of the automobile business; that my plans carry.

Now I have, like our friend from Boston, a remedy. Ha, ha, you say to yourself, pretty cute. He means to tell us to sell Maxwell Cars. Yes, that's part of it, but not the only part. I have deeper reasons.

To accomplish, I want first to get into communication with you, to become better acquainted. Let me send you The Co-Operator, our own automobile paper, free for three months. I will lead up to my plan in it. It will be a valuable educator, and in due course I will give you the complete details of my remedy.

Of course, The Co-Operator says a good deal about Maxwell Cars, but it has another mission to you. It will lead to a better understanding between us, so that later I can make you a lot of money.

Apropos of Maxwell dealers making money, it is because Maxwell Cars, while not yet absolutely perfect, are the nearest perfect, and because of their correct mechanical principles; unit construction; three-point suspension; natural water cooling; multiple-disc clutch; metal bodies; and all the other distinctive Maxwell features produce satisfied users, and every user becomes a salesman and a booster. Will you please cut out the blank below and send in at once? Let us begin the good work now.

Denj Brisca Prosideni.

Maxwell-Briscoe Motor Company

Members A. M. C. M. A.

P. O. Box 106

Tarrytown, New York

FACTORIES:

TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

MAXWELL-BRISCOE MOTOR COMPANY, Co-Operator Dept. Tarrytown, N. Y.

Gentlemen:-Enter my name on free dealers' mailing list of The

Notice This in no way carries with it the sligatest obligation, but I do it simply because Briscoe asks it and I want to be a good fellow.

THE INCOMPARABLE

THE CAR FOR SERVICE



White Wins Quaker City Endurance Run

In the Endurance Run held January 1-2 by the Quaker City Motor Club, the White Steamer was the only car which made a perfect score on the road and also was declared by the Technical Committee to be in perfect condition at the finish. The Contest Committee would not abide by the decision of the Technical Committee. They gave credit for perfect scores to two other cars and ordered a "run-off."

The supplementary contest, held January 4th, served only to emphasize the superiority of the White. The examination then made by the Technical Committee placed the White far in the lead and, accordingly, the MacDonald & Campbell trophy was awarded to the White.

With our entry of one car, we decisively defeated 27 gasoline cars representing 23 different makes Thus has another important factor been added to the long list of triumphs achieved by the White—the distinctively American car.

Write for Literature

THE WHITE COMPANY **CLEVELAND, OHIO**

New York City, Broadway at 62d St. Boston, 320 Newbury St. San Francisco, 1460 Market St. Chicago, 240 Michigan Ave. Philadelphia, 629-33 N. Broad St. Cleveland, 407 Rockwell Ave.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betta, Treasurer. F. W. Roche, Secretary. 154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . , . 10 Cents Foreign Subscription \$4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

La Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, FEBRUARY 27, 1908

The A. A. A. and the Amateur.

Even a slight improvement is better than no improvement at all. On this principle, the amateur definition drafted by the A. A. A. racing board is a very welcome sign. It is evidence both of a desire to place automobile competition on the basis of real sport and of recognition of the fact that when cash comes in at the window, sport flies out at the door.

No man can be an amateur sportsman who competes for cash and the A. A. A.'s tardy recognition of that fundamental truth is a long step in the right direction. The A. A. A. rule will, however, still permit professionals to compete against amateurs, which is contrary to the letter and spirit of all other amateur rules, and is a lapse which will not only prevent the general and unquestioned acceptance of A. A. A. amateurs in other sports, but is one that will serve to defeat the very desirable object of encouraging and building up a class

of unquestioned sportsmen. Of course, promoters may restrict races to amateurs but as in unrestricted events the professionals will be able to compete and as it is their competition that has caused and will cause the amateur sportsman to hold aloof. the improvement of the situation will be circumscribed. In such "mixed" events it is obvious that option of cash or plate as prizes must be afforded and it is equally clear that the shady amateur never will accept the cash unless he happens to win or unless the purse is sufficiently large.

The A. A. A. amateur rule is, therefore, a half-professional rule. Why generations of experience on the part of the rest of the world should be thus flouted or set at naught is past understanding. For experience, they say, is the best teacher.

The elimination of the silly stipulation that every one who chanced to be identified with the trade in any capacity was, ipse facto, a professional is a wise move: and while the underlying motive in relegagating only demonstrators, testers and chauffeurs to the professional class, is understandable, it is not a fair one. No man's occupation decently can be made a test or measure of his sportsmanship. We can name some demonstrators—aye! and a few chauffeurs-who are educated gentlemen and better amateur sportsmen than some men of millions. Or does the A. A. A. rule mean that it is only while the men pursue those callings that they are professionals and that they become amateurs when they engage in other pursuits? The language of the definition easily is capable of this construction.

In one other respect, the definition fetches things too far. When the A. A. A. attempts to say that it will be the supreme judge of amateurism-when it relegates to itself the right to reinstate as an amateur a man declared to be a professional by any other sports governing body, its position becomes untenable and indefensible. Such an assumption of power is not merely arrogant, but discourteous, and would make ducks and drakes of all sports. It would bring the A. A. A. into disrepute and into conflict with every other organization in existence and render absolutely impossible the co-operation of those who may be anxious to co-operate with it. The wise heads of the A. A. A. should not permit such a provision to be placed on their books.

The other lapses in the proposed rule chiefly are those that will concern the A. A. A. racing board itself. The framers of the rule undoubtedly know to what they refer as "valuable consideration" and as "partial means of livelihood," but those elastic terms surely will return to vex racing boards of the future. In the absence of any requirement of registration, how promoters, or the A. A. A. itself, will be able to keep track of or distinguish the amateurs and the professionals, is past understanding. Apparently they will have to accept each competitor's personal assurance regarding his status. If this is not the case. will Chairman Thompson be able to supply on request a list of those comprising the two classes? If not, who will be able to do so?

The trouble seems to be that while "wrestling with the amateur problem" as a long and much traveled field of endeavor. it is a brand new one for the A. A. A. and the A. A. A. seems unable or unwilling to profit by the experience of the rest of the world, though willingness of the sort would greatly relieve its burdens. Happily, it is not yet too late for it to "be wise in time."

Relation of Design to Skidding.

Skidding and methods of preventing it, first and last, has been one of the most popular topics of technical and laical discussion ever broached. But aside from the two factors of steering angles and differential gearing, the parent subject of turning resistances, and, in fact, the entire static or dynamic condition of the vehicle sectionally and as a whole when turning, never has been brought to notice sufficiently, nor studied with the care and attention it deserves as being of vital importance to the design of the vehicle.

It is easy enough to compute the amount of force necessary to divert a moving body of known weight and velocity from a straight into a curved line of travel. How that force is distributed throughout the fabric of the automobile, and how the distribution of the resistance is to be effected. is at once a complex and difficult subject to deal with.

In a recent editorial in these columns relating to the subject of front driving and control of the vehicle, the suggestion was offered that, "the subject of transmission and traction losses on curves . . . remains in its entirety to be investigated experimentally." That good progress in the preliminaries to this study is already being made is shown by frequent contributions

from engineers on kindred matters. Typical of these, is the statement of H. W. Alden in his paper on roller bearings, printed elsewhere, that frequently the end thrust on the bearing of a front wheel may be fully equal to the radial load due to the weight of the car. "When turning a corner of twenty-five foot radius at fifteen miles per hour," he says, " the end thrust on that front wheel bearing which gets the maximum thrust is just about the same as its legitimate load." What may be the maximum thrust on a rear wheel bearing during a severe skid, he does not attempt to say.

Without this factor in its makeup, due to the necessity of self guidance as well as self propulsion, the motor vehicle problem would be identical with that of the locomotive so far as the mechanics of the matter is concerned. Structurally the organs representing this difference are the steering gear and the differential. The methods by which they are applied, however, serve to introduce sundry other considerations, such as the friction losses in transmission due to differential action, not only on curves, but whenever varying adhesion causes one wheel to travel faster than the other; the traction losses due to side-slip in the steering wheels; skidding in all its phases; and in fact quite the whole behavior of the vehicle on the road.

These are the characteristic and determining organs of the vehicle. Yet, oddly enough, while motors, transmissions, bodies, and accessories have been undergoing tremendous improvement during the past few years of automobile development, these two groups remain identical in principle and largely the same in construction as developed in the early stages of the industry.

New Jersey's Glorious Opportunity!

The tunnel under the Hudson River which connects New York and New Jersey formally was opened on Tuesday last. Among the invited guests on the first official train were Governor J. Franklin Fort and Senator Joseph S. Frelinghuysen or New Jersey. The fact furnishes ground for suspicion that shortly there will be introduced into the legislature at Trenton a bill requiring all New Yorkers who use the tunnel route to pay a registration or other admission fee and to display a tag. And why not? As the Jerseymen pay taxes for the upkeep of the sidewalks, why should not the "outlanders" pay for the wear they impose on them? Why should non-residents be exempt? Give them a taste of "Jersey

justice." Governor Fort! They wear out the sidewalks. Children under 16 years, \$1 per year; persons over 16 and under 25 years, \$5; over 25, \$10—that's a proper tariff! Think of the glorious opportunity—of the large, elegant sum it would add to New Jersey's income, Mr. Frelinghuysen: Soak it to 'em! They're easy.

Value of Engineering Departments.

It is difficult to form an adequate opinion as to the amount of research and experimental work which is legitimately connected with the production of a thoroughly high grade and reliable motor car. Many of the smaller makers totally underestimate it, as is plain to see. Some few makers, on the other hand, have an exagerated notion of the intrinsic value of their experimental departments which is costing them very dear. The status of the experimental department is then, wholly unsettled in the industry at the present time.

Even without the intent of producing a striking amount of novelty with each new model, the amount of plant which is actually required in order to prove the materials of construction and test out the prod uct step by step and in its assembled form is far and away beyond the comprehension of the mere man in the street, as it is to many of the less advanced producers themselves. As is the case with other non-productive departments of the factory, its utility is no more apparent to the casual observer than its effect is visible to the naked eye. It is only by comparing the outputs of factories where such departments exist in their best form, with those of others in which they do not exist, or if so, only in a limited way, that the real benefit which they carry becomes appreciable. Even then, the difference is more apt to be credited to system rather than to its rightful cause.

From the manufacturer's standpoint it is an open question how much of the capital of the plant properly may be tied up in testing apparatus and outlaid in testing operations. Obviously the economic policy becomes unwise just so soon as it begins to encroach upon the standard quality of the product. The cost of testing cars and parts is really a fixed charge. It cannot be too high so long as its effect is traceable in the output and sales.

The cost of developing new ideas is even more difficult to regulate wisely. There is always the tantalizing possibility of untold wealth hanging about the vague and promising new idea, which tempts to the sinking

COMING EVENTS

March 2-7, Ormond, Fla.—Annual beach carnival, under auspices Automobile Club of America.

March 2-8, San Francisco, Cal.—California Woman's Automobile Club's show in Coliseum.

March 7-14, Boston, Mass.—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

March 9-14, Buffalo, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

March 15-April 1, Omaha, Neb.—Omaha Automobile Dealers' Association's annual show in the Auditorium.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

March 18-24, New Haven, Conn.—New Haven Automobile Dealers' Association's show in Music Hall.

March 18-25, Rochester, N. Y.—Rochester Automobile Club's show in new Convention hall.

March 23-28, Indianapolis, Ind.—Indianapolis Automobile Dealers' Association's show week.

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

April 24, Westchester County, N. Y.—Briarcliff trophy race for stock cars.

of profits in experiments, experts' salaries, and commercial ventures not wholly warranted by business sense. Certainly design must not be permitted to stagnate so long as direct and evident improvement is possible. Yet progress demands a constant attitude of quest for improvement. The difficulty is to distinguish between the probable paying or non-paying quality of the proposed improvement as well as of its initial cost.

Some clamor loudly for the "engineering era" in automobile design and construction. No regime imaginable could be more acceptable than one under which cars should be built with sufficient approximation to engineering principle to stand up for a reasonable length of time, even under severe useage. But it must be understood that industrial stability demands that henceforth the engineering department shall pay its way. A close balance must be struck between the paying and non-paying qualities of these expensive and essential, though non-productive elements of the producing mechanism.

ECONOMY RUN ON FROZEN ROADS

Twenty-three Participants in Long Island Contest—More Than Half "Economized" on Running Time.

Twenty-three cars competed in the economy test on Tuesday last, 25th inst., promoted by the Long Island Automobile Club. All but four finished the 242 miles run over frozen Long Island roads, which was A

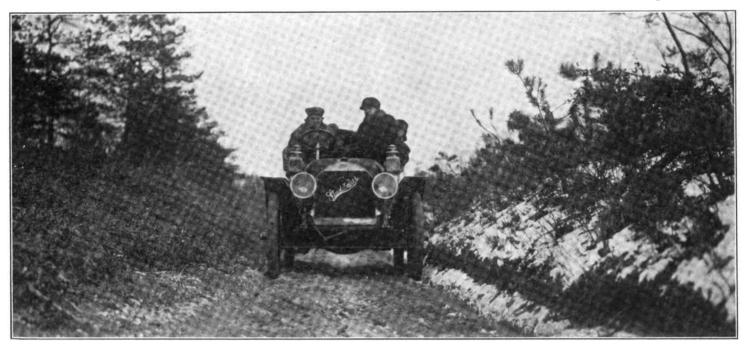
The event of Tuesday was supposed to have been an economy test, but only about half of the contestants gave serious thought to the amount of gasolene and oil they used. The others were either too cold or too anxious to "hit it up." As official checking in could not, by the rules, begin until 9 p. m., and as thirteen of the cars that finished checked in before that time, it will easily be seen what is meant.

The start was made from the Long Island Automobile Club's house, at 360 Cum-

stead of to Montauk Point, as first intended.

The first car to be put out of commission was W. E. Shuttleworth's Haynes, which retired east of Patchogue. The Hol-Tan, driven by V. A. Neilson, got into difficulties at Sayville, on the return trip. A strut rod gave way, allowing the axle to sag, and the driving gears to bind, the friction eventually heating the parts and twisting off the driving shaft.

The mishap which put David Mahoney (Lozier) out of the running on the outward



JOHN HOLM (STUDEBAKER) NEGOTIATING THE FROZEN RUTS



R A. VAIL (FRANKLIN) AND OTHER CONTENDERS HALTED FOR LUNCH

much better showing than had been looked for. Just who won the contest is not known, as the technical committee of the Long Island Club will not have the results figured for several days.

berland avenue. Brooklyn, beginning at 6 a. m., the cars being dispatched at one minute intervals according to horsepower The route took them to Babylon, Southampton, Patchogue, and Amagansett, in-

leg was peculiar and regretable. A team with a stupid driver, woman and child as freight, unexpectedly turned across the road leading from Southampton toward Amagansett. It was a case of either running



head on into the entire outfit or turning sharply into the bank, and Mahoney took the latter course. The result was that both left wheels were smashed when the car struck the bank.

The other car which failed to report was the Buick, driven by Hugh Gibson. It broke a wheel at a point three miles east of Patchogue, and a new wheel could not be secured in time to reach Brooklyn within the specified time limit. Punctures were frequent, Charles A. Carlson (Winton) having suffered seven.

The cars arrived at the finish in Brooklyn from 4 o'clock in the afternoon until half-past ten at night, the last one reporting being the little single cylinder Cadillac of

There were four controls—at Babylon, Southampton, Patchogue and Amagansett, one hour being allowed for luncheon.

Milwaukee Postpones Its Contest.

The three day reliability run of the Milwaukee Automobile Trade Association, planned for Wednesday, Thursday and Friday of this week, has been postponed until next month, and will occur between March 10 and 25. This action was made necessary because of the impossibility of some of the roads to be traversed on the route selected The committee has provided for three classes, as follows: Class A, 1907 or 1908 stock touring cars, runabouts or roadsters, costing \$3,000 or over; Class B, 1907 or 1908

former schedule. The storage and washing charges per month vary with the length of the vehicle. For a car up to 9 feet 9 inches in length, the storage charge is something like \$7.50, and the cleaning is rated at \$10. From this the charges increase proportionately to \$12 for storage and \$13.50 in round numbers, for washing. The daily charge for storage alone is 75 cents, while in the event of the chauffeur cleaning his own machine. a charge of about \$2 a month is made for the water used.

Alcohol Fuel Test for Motor Cabs.

An alcohol fuel test for motor cabs, is to be one of the features of the industrial vehicle trials to be held under the auspices





I. C. KIRKHAM (MAXWELL)

D. C. TEETER (RAMBLER)

James D. Rourk. This car would not have been the last had it not slipped a wheel, which let the axle down to the ground. When new bearings had been secured the run to Amagansett was resumed with success.

As stated before, the committee has not announced the awards, but the cars finished in the following order:

W. A. Flinn, Acme; W. A. Bowers, Thomas-Detroit; Kingsley Swan, Stevens-Duryea; C. G. Arnold, Pope-Hartford; H. Michenor, Lozier; Robert Morton, Pullman, J. W. Mears, Acme; W. Walton, Acme; W. Birdsall, Mora; John Holm, Studebaker; Philip Hines, Pope Hartford; H. K. Knepper, Freyer Miller; D. C. Teeter, Rambler; R. A. Vail, Franklin; C. A. Carlson, Winton; I. C. Kirkham, Maxwell; C. Hosley, Maxwell; H. A. Martin, American Mors, and James D. Rourk, Cadillac.

The awards will be made on the basis of cost per passenger, including operator and observer, for fuel and lubricant consumed. Gasolene is charged at the rate of 25 cents per gallon, and lubricating oil at \$1 per gallon. No penalizations were made for repairs, replacements of adjustments to a car or equipment. The first award will be a trophy costing not less than \$200; second prize a trophy valued at \$100, and third prize, one costing not less than \$50.

stock touring cars, runabouts or roadsters, costing from \$1,800 to \$3,000; Class C. 1907 or 1908 stock touring cars, runabouts or roadsters, costing \$1,800 or under.

Endurance Run with Sealed Bonnets.

The Harrisburg (Pa.) Automobile Club has decided to make its endurance run on May 4 and 5 a sealed bonnet contest as well, and R. H. Johnston of New York has been asked to act as referee. The route will be from Harrisburg through Lebanon, Reading, Allentown and Easton to Philadelphia, the first day. The return journey will be made by way of Norristown, Reading, Lancaster, Marietta, Mount Joy and Middletown, to Harrisburg. Four classes have been provided for as follows: Touring cars costing \$2,250 and over; touring cars costing under \$2,250; runabouts costing \$2,000 and over, and runabouts costing under \$2,000. All working parts will be sealed and a technical committee will examine the cars for mechanical defects at the conclusion of the run.

French Garage Regulations Revised.

A new set of garage regulations has just been issued by the French Chambre Syndicale d'Automobile which fixes the charges for garaging of cars at rates representing about a 50 per cent. increase over the of the Automobile Club of France in May next. Competing vehicles will be divided into classifications according to the number of cylinders carried by their motors, and their bore, the basis being the single cylinder motor with a limiting bore of 100 mm., while the maximum size for four cylinder motors will be 80 mm. The weights must bear a certain relation to engine capacity as well, 1,000 kilograms being the limiting weight for the single cylinder cars having engines of less than 100 mm, bore. The rules provide for a maximum speed of 30 kilometres per hour, and place a restriction on the number of spare tires which may be employed during the trials. After a series of preliminary daily runs, the successful vehicles will be subjected to a final test which will be run on a kilometre-ton basis.

Savannah Declares Holiday for Racing.

The Common Council of the city of Savannah has passed a special ordinance declaring March 18 and 19, the dates of the stock car races in that city, to be special holidays, and this has been followed by a proclamation from Mayor Tiedeman to the same effect. As a result, the city's institutions, trade and banking organizations will be closed on those days, and the people generally will forsake business to go to the races.

"RACERS" RESTING IN CHICAGO

American Car Leads the Way, After Strenuous Struggle Through Snow—Horses Play Important Parts.

Although an Arctic explorer predicted that if the contestants in the so-called New York-Paris race ever succeeded in getting to Alaska the contest would develop into a struggle between them to see who could

Chicago, 1,043 miles from New York, was reached by the leading Thomas car, Tuesday afternoon. The French DeDion and the Italian Zust had progressed as far as Michigan City, 987 miles, while the German Prothos was last reported at Ligonier, Ind., 912 miles. The Motobloc, the other French car, had gotten to Kendallville, Ind.. Tuesday, and at last reports was still going on.

Roberts, in the Thomas car, has had a terrible time of it in the last week. Since he left Kendallville, Ind., six days ago, he farmers are reaping a harvest. According to the correspondent in the Thomas car it has cost \$800 to cover the 64 miles between South Bend and Hobart, while the mile and one-half of snow drift near Burdick station, reached at 7 a. m. Tuesday, cost the Thomas outfit \$95. This went to the farmers for digging the car out of the drifts and using their horses to pull it through the smaller ones. All the other drivers report similar experiences.

It was a relief to Roberts and his fatigued





WHEN REAL HORSEPOWER WAS APPLIED

"BUMPING IT" OVER THE CROSS TIES

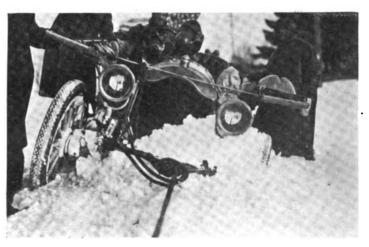
procure the most dogs in the shortest period of time, dismantle the car and load it on sleds to be pulled by the canines, reports from snowbound Indiana show that it already has developed into a call for horses instead of dogs. Whichever of the five contestants can secure the most horses and the largest crews of rural snow shovelers is the one that makes the greatest headway.

"This is no race," wires Bourcier St. Chaf-

has covered only 152 miles, an average of 25 1-3 miles per day. Much of this distance was accomplished with the aid of horses and large crews of snow shovelers, while more of the ground has been covered on rural trolley tracks, which necessitated much bumping over railroad ties and trestles. In that time his longest day's run was on Thursday, from Burdick, Ind., to Chicago, 47 miles. The day before only 9

crew when they sighted Chicago on Tuesday afternoon. In the fourteen days since his departure he has lost twenty pounds in weight; he looked it when he reached Chicago. Part of the last day into Chicago was covered on the tracks of the Lake Shore and the Elgin, Joliet and Eastern railroads. As Chicago was entered ten cars from the Chicago Automobile Club met the Thomas car and escorted it to the club house, where





ROBERTS CHARGING THROUGH THE INDIANA SNOW

WHEN SHOVELS AND HORSES AGAIN BECAME NECESSARY

fray, of the DeDion outfit, to the New York newspaper promoting the American end of the affair, and the Frenchman seems to have guessed right the very first time. It is an endurance contest but not in the accepted sense; it is more of a combination horse-pulling and snow-shovelling contest.

miles were covered, from Michigan City to Burdick, and this distance was literally dug and pulled through yard by yard.

Roberts's experience has been the experience of the others. The cars have had to be pulled through anywhere from two to twelve feet of snow in Indiana and the

the crew got their first real rest since leaving Buffalo. The Thomas car will be thoroughly overhauled in Chicago and will not leave before this morning (Thursday).

Although Roberts has had a strenuous time in leading the way to Chicago the foreigners have had just as hard a trial in



their rear chase after the American car. If Roberts and his crew were tired when they reached Chicago, the foreigners are practically "all in." Maas and Knape, on the German car, are about used up and Lieutenant Koeppen, the other member of the German party, has gone on to Chicago by train to arrange for extra tires and parts so the car will not be delayed when it reaches the Windy City.

As was expected the French DeDion and Italian Zust cars reached Chicago last night (Wednesday). The Thomas crew spent the day resting in Chicago, and the Frenchmen and Italians will remain to-day and are expected to leave with the Thomas car to-morrow

The entry of the DeDion and Zust into Chicago afforded some excitement, as it prompted a good natured race between the two cars. Nearly one hundred cars acted as escort and a brass band helped make some enthusiasm, although it could not be stopped from playing "We Won't Get Home Till Morning!" It wasn't the case for the Zust beat the DeDion to the club house by just one miute, arriving at 6.32 p. m., after which banquets were in order.

The German Prothos car was reported at 3 p. m. yesterday at Elkhart, Ind., having covered 932 miles, while the Motobloc was at Goshen, Ind., at 5 p. m.

Probably the most disagreeable incident of the contest occurred on Tuesday night. when the Motobloc car was looted of its entire outfit, according to a dispatch from Charles Godard, its commander. It may have been the sight of two cases of champagne strapped to the car which prompted the loot, but anyway, according to Godard, the car was left in a barn at Goshen, Ind., over night. When he examined the car the next morning it had been stripped of every thing, including the champagne cameras, films, guns, tools, ammunition, supplies, clothes and even the crew's extra changes of linen. Godard states that the authorities refused to aid them in any way and that their inability to speak English perfectly caused the police to regard them with suspicion. They proceeded without having found a trace of the thieves.

What has become of the "independent" which left New York a day before the "regular," by a different route, but also bound for Paris, no one knows or seems to care. The three men on the car had a squabble between themselves when they got to Philadelphia, and one of them, LeLouvier, gothis dander up and went back to Paris. The others continued but have not been heard from since.

Larned Launches Its Club.

Fifteen automobilists of Larned, Kan., have formed the Larned Automobile Club with these officers: President, D. A. Ely; vice-president, E. T. Eggleston; secretary-treasurer, R. H. Moffett; executive committee, J. H. Boisseau, A. A. Doerr and Dr. Dillon.

MIDWINTER ENDURANCE RUN EASY

Fourteen out of Twenty Starters in Bay State Contest Made Perfect Scores— Three Failed to Finish.

Beneath skies that were a reminder of June, but over roads that showed earmarks of winter, twenty cars rolled 135 miles on a triangular course from Boston to Providence, Worcester and return last Saturday, 22d inst., in the annual mid-winter endurance run promoted by the Bay State Automobile Association. The test was easy, for of the twenty cars that started, fourteen finished with perfect scores, three had a small number of points against them for minor reasons, while three were considered withdrawn because they did not report at the finish.

It was just one minute after seven o'clock when Frank Wing, in the Marmon, got the word to start, and at one minute intervals the remaining nineteen left Commonwealth avenue, Boston, headed for Providence. Walpole was the first checking station and all the cars reached there on time and in good order. From Walpole the route led through Attleboro and Pawtucket to Prov idence, which was due to be reached at 9.40 a. m. Up to this point the roads had been in very good condition and all the contestants, with the exception of Robbins (Springfield), reached there on time. The drivers were allowed to replenish gasolene, oil and water tanks at Providence.

It became evident that the schedule was too easy, so ten minutes was cut off the run from Providence to Uxbridge. This was considered the hardest part of the trip, the deep frozen ruts causing many tired arms. All managed to get through, however, except Dennison, in the Knox, who stopped near Uxbridge. At Woonsocket the endurancers got their first ovation. Crowds four and five deep lined the sidewalks.

The schedule time was further reduced from Uxbridge to Worcester, where the din ner stop was made, and from the latter place to Boston. The intermediate checking station was at the Wayside Inn, in Sudbury, Mass., famous as the scene of that story telling bout described by the poet Lonkfellow in his collection of "Tales of a Wayside Inn."

When the cars reached Boston they were taken to the big White garage where they were given over to the technical committee, which, after considerable deliberation decided that fourteen cars were entitled to first class certificates for having made per fect scores. The three cars that were penalized were V. A. Charles's Rambler, which lost four points because a needle point was adjusted; Oliver Light's Thomas Detroit, five points on account of a stalled engine,

and J. W. Robinson's Stevens-Duryea, which had eight points charged against it for repairing a broken fan belt.

The summary follows:

Walter Jones, Studebaker Perfect
Frank Wing, Marmon Perfect
C. E. Whitten, Thomas Detroit. Perfect
J. Ruggles, Atlas Perfect
William Bourque, Knox Perfect
Walter White, White Persect
Hal K. Sheridan, White Perfect
A U Dorsey Thomas Flyer Derfect
A. H. Dorsey, Thomas Flyer Perfect
Fred Pratt, Reo Perfect
J. C. Kennedy, Austin Perfect
J. H. Hobson, Oldsmobile Perfect
E. W. Williams, Rambler Perfect
Theodore Young, Franklin Perfect
Harry Minchenor, Lozier Perfect
V. A. Charles, Rambler 4 Points
Oliver Light, Thomas-Detroit 5 Points
J. W. Robinson, StevDuryea 8 Points
L. Robbins, Springfield Withdrawn
A. E. Dennison, Knox Withdrawn
L. B. Harris, Winton Withdrawn

Despatch Carriers Make Good Progress.

Starting six days after the cars in the socalled New York to Paris race, the 30 horsepower Studebaker car, which is carrying a message from General Frederick D. Grant, of Governor's Island, N. Y., to the commanding officer at Fort Leavenworth, Kan., in an attempt to prove the value of the automobile in carrying dispatches between army posts, reached Chicago on Tuesday, five minutes in advance of the leading car in the around-the-world snow-shovelling contest. The car left New York City on Tuesday, 18th inst., and reached Albany, 150 miles, at 11:15 o'clock that night. At 10 o'clock the next morning it was reported at Fayetteville, and at Auburn, 325 miles, at 4 o'clock that afternoon. Thursday morning the car rolled into Rochester, 396 miles, after being held up in a snowdrift ali night. Erie, Pa., was reached Thursday night and Cleveland at 4:21 a. m. Friday. William Walls and Charles Hammond alternated at the steering wheel, driving night and day, which explains how the car made such astonishing mileage through snowdrifts which baffled the heavily laden New York-Paris contestants. These cars were passed one by one, the last one being overtaken at Hobart, Ind., twenty miles from Chicago. The latter city was reached as 4:20 p. m. Tuesday, 24th inst. The Studebaker car, by the way, is using chains on the wheels but is fitted with the Continental anti-skid red rubber tires.

Ohio Non-Stop Test Still Continues.

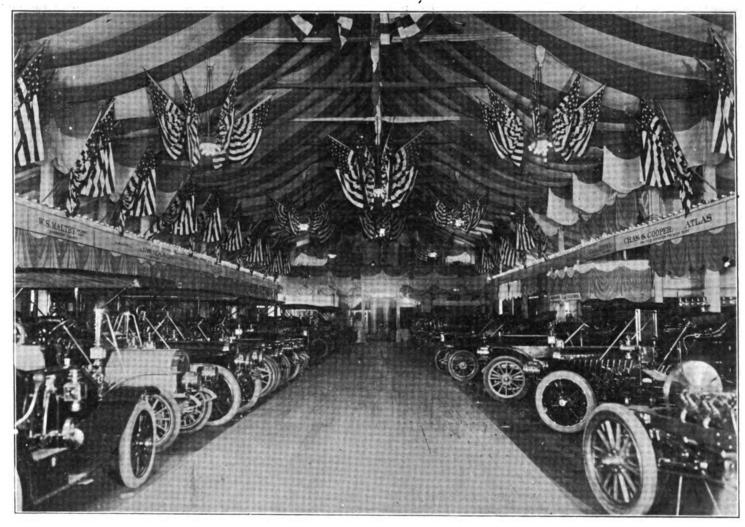
At last accounts, the Franklin non-stop and mileage test which was undertaken on February 11 by the Sid Black Automobile Co., the Franklin agents in Cincinnati, was still progressing without interruption, the odometer registering more than 2,500 miles Four expert drivers are employed, alternating every six hours, and being accompanied by two observers. The 28 horsepower caremployed has encountered some villainous roads and equally vile weather, but so far has run without hitch or skip.

THREE MAYORS AT NEWARK SHOW

Brilliant Opening of New Jersey's First Annual Automobile Exhibition—Representative List of Cars Staged.

With congratulations from the mayors of three cities and in the presence of several thousand people, the first annual show of the New Jersey Automobile and Motor Club and the New Jersey Automobile Trade stripes have been used to drape the ceiling, and strips of the same material have been carried down to within ten feet or so of the floor on each side of the oblong room. At the end of the main aisle furthest from the entrance is a large electric sign with the words "Automobile Show" flanked on either side by heroic size gilded eagles, behind which are festooned flags of all nations. Clusters of American flags on poles are hung every few feet apart along the sides of the hall, fastened to the pillars on

car, Northern, Cadillac and Packard; W. S. Maltbie, Corbin; J. W. Mason, Stoddard-Dayton and Maxwell; Mitchell Motor Car Co., Mitchell; Carl H. Page Co., Peerless, Ellis Motor Car Co., Pierce and Knox; Star Motor Co., Pullman and Napier; F. E. Boland Motor Co., National; Brush-McLaren Co., Brush; Rickey Machine Co., Marmon; Sheldon W. Case, Holsman; Allen-Kingston Motor Car Co., Allen-Kingston; Charles S. Cooper, Atlas; Essex Automobile Co., Jackson; Garford Motor Car Co., Garford;



GENERAL VIEW OF THE AUTOMOBILE SHOW IN ELECTRIC PARK AUDITORIUM, NEWARK, N. J.

Association was launched at Electric Park, Newark, last Friday night, 21st inst. Mayor Jacob Haussling, of Newark, officially opened the show and took occasion to compliment the local motorists upon the splendid result of their first endeavor. The other two mayors who lent official dignity to the opening night were Isaac Shoenthal of Orange, and William Cardwell of East Orange.

Newark possesses few buildings with floor space sufficient to hold a moderate sized automobile show, and this fact was apparent on Friday night, and on Washington's Birthday, when the small Electric Park Auditorium was fairly packed.

White and yellow bunting in alternate

each side of the automobile show spaces, which are divided by the main aisle down the center of the hall and by two small aisles near the walls. The accessories exhibitors have been placed along each side wall and the moving picture entertainment, without which no local show would be complete, has been located in a balcony just inside the building.

Thirty-three different makes of cars are shown, and twenty-two accessory exhibitors display their wares, the full list of exhibitors being as follows:

Greene Motor Car Co., Oldsmobile, Locomobile and Pope-Waverly; Calvert-Zusi Auto Co., Winton; Hygrade Motor Car Co., Ford; Motor Car Co. of New Jersey, Auto-

J. H. Johnston & Co.. Grout and Cameron, H. J. Kochler, Buick and Waltham; A. G. Spalding & Bros., Stevens-Duryea; the White Co., White.

H. T. Alexander & Co., American Auto Rim Co., Auto Tire Repair Co., Brick Church Auto Supply Co., Century Optical Co., Electrical Maintenance & Repair Co., Ellis Motor Car Co., Electric Motor Equipment Co., George A Haws, Adolph Karl & Co., Lovell-McConnell Mfg. Co., National Oil & Supply Co., Newark Garage & Repair Co., Newmastic Tire Co., New York Auto Top & Supply Co., Oriental Rubber Co., W. S. Sheppard, C. F. Splitdorf, Standard Oil Co., Tea Tray Co., O. W. Young, and Louis J. Wurth.

PRIVATE GARAGE CONSTRUCTION

Some of the Problems Involved—Suggestions by an Architect Concerning Dimensions and Essential Features.

As the number of private garages or motor houses increases, it becomes apparent that the construction of these small repositories is quite as much of a problem as that involved in the evolution of the larger structures which are intended to house a great number of vehicles. One of the particular embarrassments is the fact that the house made to fit one car, may be too small to accommodate its successor, while the requirements of a really suitable structure of this sort, forbid it from being made readily extensible if absolute permanence is desired.

In this connection an outline of the more essential requirements of the garage, embodied in a paper read before the British Architectural Association recently, by C. Harrison Townsend affords an interesting and concise summary. As he indicates, the starting point of the garage problem is the area required to store the car, and the amount of head room it is likely to need. The possible replacement of the car by a larger one, must be considered, while possible changes in design of all machines, such as have been responsible for the enlarge ment of a garage elevator three successive times, in one case which he instances, also must be allowed for.

The following table gives the general overall dimensions of the different models produced by a single large manufacturer, and reveals the amount of difference existing between the volumetric requirements of different machines:

"For giving the car proper attention space should be arranged between it and the walls at each side and at each end," says the authority in question. "This should be at least 2 feet 6 inches where a pit is provided, but if the latter does not exist, and the car is raised for underwork, the space should be 3 feet 3 inches. In the case of several cars standing side by side, there need only be 2 feet 6 inches or 3 feet between them. So far, then, we have reached the internal size of a one-car house 16 feet + 2 feet 6 inches, or 3 feet 3 inches + 2 feet 6 inches or 3 feet 3 inches = 21 feet or 22 feet 6 inches for the length, and 6 feet + 2 feet 6 inches or 3 feet 3 inches + 2 feet 6 inches or 3 feet 3 inches = 11 feet or 12 feet 6 inches as the width.

"The height of the doors should be sufficient to pass in a car with the hood up, plus its luggage rail, and, possibly, tires on the roof, or, say, 9 feet. They should be at least 8 feet wide in the clear, and may be either steel revolving shutters or they may be hinged—opening outwards, of course—and preferably under a pent roof. Finally, sliding doors may be employed—sometimes the most difficult arrangement to provide for.

"The walls should either be faced—at all events, to a height of about 4 feet from the ground—with glazed bricks, or lined with tiles. They should have a coved brick or tile at their junction with the floor, to avoid the harboring of grease and dirt. All angles to recesses—such as that for the hydrant of the radiators—should be rounded, and there should be as few projecting features as possible. Just above the floor level in each external wall should be inserted air gratings. They should, where possible, be placed behind the small radiators.

"In the large number of garages cement is laid to a smooth finish and to falls. I do

Type.	Wheel Base. ft. in.	Length.	Width.	
14-16 Horsepower.				
Side entrance	8 4 8 4	12 6 12 6	5 5 5 5 5 5 5 5 5 5 5 5 5	5 3
" " (hood folded)	8 4 8 4	13 6	5 2 5 2	5 6
Single landaulette	9 i	13 0	5 2	7 0
Limousine	90	13 0	5 2 5 2	7 0
City carriage	6 10	10 8	5 5	7 4
Side entrance	9 0	13 0	5 3	5 5
" " (hood up)	9 0	13 0	5 3 5 5 5 5 5 5	7 7
" " (hood folded)	9 0	14 0	5 3	5 8 5 5
Seven-seater side entrance	9 9	13 10	5 3	5 5
Three-quarter landaulette	9 9	13 10		77
Limousine	9 9	13 10	5 3	7 7
Side entrance	9 3	13 4	5 7	5 5
" " (hood up)	$\begin{vmatrix} 9 & 3 \\ 9 & 3 \end{vmatrix}$	13 4	5 7 5 7 5 7 5 5	7 7
" " (hood folded)	9 3	14 4	5 7	5 8
Three-quarter landaulette	10 0	14 1	5 5	7 8
Limousine	10 0	14 1	5 7	7 8
Side entrance	98	13 8	6 0	5 6
" " (hood up)	9 8	13 8	6 0	7 8
" " (hood folded)	9 8	14 8	6 0	5 9
Seven-seater side entrance	10 4	14 4	6 0	5 6
Three-quarter landaulette	10 4	14 4	6 0	7 8
Limousine	10 4	14 4	6 0	7 8

N. B.—In some cases the head lamps mean a further increase in length.

not, however, think this a very efficient material. The action of the dropped oil on its surface tends to rot and 'take the virtue' out of the cement, and granolithic distinctly offers less opportunity for this. Stone flags, laid not on a concrete bed but on sleeper walls for the advantage of the air space beneath thus obtained, seem to add still further to the risk of the dangerous sparks that may result from the car coming in or going out with a chain or stud antiskid appliance fixed on the tires. Again, unless, the space beneath is of considerable size-a cellar, in fact-there would be the danger of its forming a chamber where explosive gas could collect as the result of leakage.

"The draws should not be underground pipes, but should consist of open, half-round channels

"In cases where it is incumbent to make use of the pit, the best size for this is 6 feet by 3 feet by 4 feet 6 inches or 4 feet 9 inches deep. Its sides should be lined either with glazed bricks or tiles, and it will be found convenient to form in them a recess on each side in which the chauffeur when at work can place his tools from time to time. Iron ring steps afford access to it. An American expert strongly advocates the extension of the pit beyond the outer wall of the garage, as tending towards a certain amount of ventilation at all events, as giving means of escape for the chauffeur, who would otherwise be shut up in a trap in case of fire

trap in case of fire. . . . "It is of importance that there should be no risk of the temperature of the motor house falling to freezing point. As regards, however, the heating and consequent drying of the atmosphere of the motor house, there are two conflicting claims to be satisfied. Expert carriage builders plead on behalf of the painted body and wheels for a house 'which cannot be too dry'; while Dr. C. O. Weber, the authority as far as rubber is concerned, states that tires are likely to keep distinctly better in a damp that a dry room.' Keeping a balance between these two claims we find that the motor house is best when dry, but not unduly so. Its temperature should be about 60 degrees F. The heating apparatus, of course, should have no opening from the motor house, but be arranged with external access, and a low pressure system with radiators will be found the best. These may be placed as found advisable, but in a garage of any size there will be a considerable advantage if a cupboard be provided containing a small radiator, to be made use of when drying rugs or cushions, and with ventilation to allow the escape of the resultant steam. . . . "The storage place for tires, testing appara tus, pumps and spares generally," he says, "should be distinct from that in which cloths, cleaning oil, brushes, waste, etc., are

Digitized by Google

kept on metal-covered shelves, and with proper ventilation. There should be rack accommodation for rugs, extra cushions

and the like."

SPORT ON A CRYSTAL MOTORDROME

Frozen Lake Utilized for Packard Tests and Experiments—Fun with a Practical End in View.

The cold winds of winter having served to coat with thick ice the water of Lake St. Claire, in Michigan, it occurred to the fertile mind of the Packard management that right at hand was a perfect course over General Manager Joy himself having been unable to resist the temptation.

Remedy for Leaky Radiators.

Edwin F. Field, of Auburn, Me., has "discovered" a panacea for leaky radiators, which is claimed to be the long-lost and much-sought-for boiler sealing compound, the lack of which was responsible for so many heavy repair bills in the halcyon days of the teakettle boiler. In fact, Mr. Field's discovery is the result of many years of

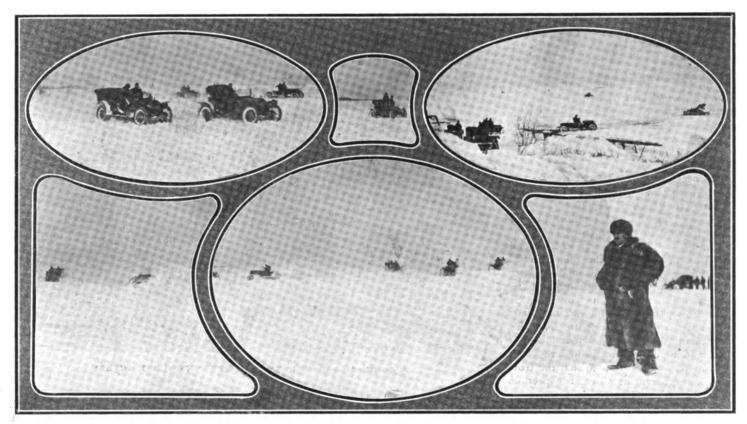
TROUBLE THAT WAS MYSTIFYING

Its Source was Unsuspected Because it was Unusual—An Old Timer's Narrative of a Curious Experience.

"One of the hardest problems I ever encountered in the way of ignition trouble," said the motorist who is qualified to pass as

an old timer, "was presented to me one aft-

ernoon when I was taking a trial spin in



PACKARD TESTS AND EXPERIMENTS ON THE FROZEN SURFACE OF LAKE ST. CLAIRE-GENERAL MANAGER JOY LOOKING ON

which to drive their cars in a series of tests and experiments as conclusive in their results as would be obtained by many miles of summer driving, and with far more of real sport and specularity.

As a result for several weeks the testers of the Packard Motor Car Co. have been taking advantage of the opportunities for testing cars offered by the snow covered ice on the lake and each day there have been a dozen automobiles racing and chasing through the snow drifts, and up and down the snow shrouded banks, making the snow fly in picturesque fashion, as the accompanying illustrations serve to show.

To the Packard people the opportunity for fast driving on the ice appeared as somewhat of the nature of sport rather than work, and since the last heavy snow storm the administration, engineering and testing departments have been busy for days driving cars through the snow clogged thoroughfares leading out of Detroit, and engaging in races on the frozen lake without thought or fear of police interference, even

experiment with boilers of this type. Though intended primarily for sealing a leaky boiler, however, the remedy is equally applicable to radiators which lack the essential watertight feature. The medicine consists of a black powder of secret composition which, when dumped into the offending boiler or radiator at once finds its way to the affected part, stopping up the hole or holes by a sudden and silent process and leaving behind it a permanent repair, affecting only the injured locality.

Coasting Over Sharp Gravel.

It is of small consequence whether a patch of loose and sharp gravel in the road is taken at high or low speed, so far as wear on the tires is concerned, so long as the clutch is released during the interval and the car is permitted to "coast." When the wheels are relieved of the traction strain nothing more is to be gained by running slowly than by running fast, so long as sufficient steerage way is maintained, and not sufficient speed attained to cause skidding.

a car that had just been overhauled. It was a one cylinder runabout, and as I had owned and driven it for several months 1 was entirely familiar with every piece in its make-up, and I believed that nothing but a broken part or a burned out coil could give me more than a few few minutes of trouble

"When I started for my trial ride, on the afternoon in question. I put in a new spark plug; it was one of the type where a wire runs through the mica core and extends out about one-half an inch, its end being bent over like a hook and ending close to a similar wire or sparking terminal that was fastened to the base or shell. Before inserting the plug I tested it and finding that it was all right, I did not attribute the difficulty I had in starting to anything connected with it. After cranking a good deal more than was generally required of me the engine started and I drove away.

"My first trouble came when I began the ascent of a steep hill. The explosions be came very irregular with a consequent loss

of power. The first thought was batteries, but knowing that they were all right, I looked over the rest of the ignition and found nothing amiss. After a lot of delay I loosened the secondary wire from the plug took the latter out and found that to be all right as I had supposed it would be. Again I cranked the engine and after a little time succeeded in getting it going, but as soon as I tried to move the car the same irregularity of firing was noticeable.

"Well what to do I didn't know. My gasolene was good. My carburetter was working, batteries O. K. I had compression and the spark plug responded to all tests and the machine would not begin to do its work. It was merely a case of 'think it over' and as I am not a person who aimlessly tinkers in the hope of accidentally finding out where the trouble lies. I did not make a half dozen changes in the different parts which were working all right but confined myself to seeking something that was apparently susceptible of change or readjustment. As I could find nothing that was out of order I determined it must be in the spark plug and though that was apparently all right, I replaced it with another, tried results and found I had located and remedied the difficulty.

"Naturally my curiosity was excited and a careful examination of the plug showed that the whole center core was slightly loose and when I tightened the nut holding the secondary wire I turned the core so that the sparking points became too far apart for the spark to jump when the load was on. In taking out the plug I first loosened the nut and in doing this turned the core back to its normal position so that the trouble was not apparent at a casual inspection.

"It was a very unusual thing to have occur and if it ever happens again it will not bother me for any great length of time, but I venture to say that no matter how experienced in gas engine matters a man may be the same perplexity encountered for the first time will make as much trouble for him as it made for me. When a brand new spark plug tests out all right there's mighty little reason for ascribing to it a trouble which might come from some other source."

New Theory of Carbon Deposit.

A foreign investigator has advanced the theory that the use of lubricating oils containing quantities of vegetable or animal oil is responsible for the presence of copper in the cylinder incrustation usually known as "carbon deposit," and in which traces of that metal have recently been discovered abroad. His idea is that the "fatty" acids of the spurious constituent in the oil attacks the brasses of the various bearings forming a small amount of "metallic soap" which finds its way past the piston and into the combustion chamber. The high heat existing during the cycle is then sufficient to decompose it and leave the metal in the crust which the heavier constituents of the oil leave behind.

THE MOTOR WORLD

MAKING PATHS FOR FIRE FIGHTERS

Automobile Performs Pioneer Duty for Detroit Department—Clears the Roadway in Snow Bound Streets.

While the automobile has been put to many uses that are foreign to its general occupation of transporting persons or merchandise it remained for the Cadillac Motor Car Co. to prove its utility as a path \$1,800; cars listed from \$1,800 to \$2,750; cars listed from \$2,750 to \$3,500, and cars listed over \$3,500. A silver loving cup will be the first and only prize in each event.

Portland's Show Simple but Pleasing.

Portland's annual automobile and motorboat show is holding the boards in the Maine seaport this week. The show opened on Monday night in the Auditorium and will continue throughout the week. The decorations are simple but pleasing. Red



CADILLAC BREAKING ROAD FOR DETROIT FIRE FIGHTERS

maker for the fire department. A few days ago, after a heavy fall of snow in the city of Detroit, Mich., it was feared that the fire department would experience difficulty and delay in responding to an alarm if one should be sounded. At the solicitation of one of the fire companies, whose location is near the Cadillac factory, a 25 horsepower Cadillac was pressed into service and a snow scraper fastened behind it. Although the snow was a foot deep, with occasional drifts much deeper, the car not only was able to break a way for itself, but succeeded in pulling the plow and in clearing a path over about 15 miles of streets. and in not much more than an hour.

Indianapolis Show Awaits Freemasons.

Indianapolis dealers have decided to postpone their proposed "open house show week" to March 23-28, instead of one week earlier, as first arranged. Two thousand Masons are expected in Indianapolis during the former week and the dealers are confident that many of the lodge members will ride home in new automobiles. It has been definitely decided to hold a hill climb and a parade during the week, the events for the former being as follows: Cars listed at \$1,000 or under; cars listed from \$1,000 to and white is the general color scheme, the floor being carpeted in green, while thousands of flags hang from the girders Among the exhibitors are Herbert A. Harmon, Franklin and White; F. A. Nickerson Co., Oldsmobile; Stoughton Folkins, Maxwell; Portland Co., Knox; Spear Auto Co., Ford; L. C. Gilson, Reo, Premier and Stanley; Maine Motor Carriage Co., Stevens-Duryea, Peerless and Pope Hartford; and Swan Stuart, Cadillac. J. H. Dowling, the Thomas agent is not exhibiting at the show, but is holding "open house" at his garage on Forest avenue.

Tire Makers Offer Cash "Accelerators."

If the car driven by the winner of the Briarcliff trophy stock car race on April 24 is equipped with Diamond tires, it means an extra \$500 for him, the Diamond Rubber Co. having hung up that purse as an added incentive. For second place they will give \$350, and for third, \$150. The Diamond corps of tire experts will be on the course, of course, to "lend a hand" when it is necessary

Similarly the Continental Caoutehoue Co. has offered \$200 for victory in the 300 mile race on Ormond Beach next week, and \$100 for first place in the 100 miles event.

A. A. A. FRAMES AN AMATEUR RULE

But It Proves of a Very Original Character —Two Cities Apply for Vanderbilt Cup Race.

Three days of last week were spent by the sub-committee of the American Automobile Association's racing board in the work of revising the racing rules, which suggests that many changes were made. The nature and extent of the amendments are, however, official secrets save in one respect: It is authoritatively admitted that the committee heeded the demand for an amateur definition, the rule as drafted for submission to the full board taking the following form:

"A man who has never driven or raced a motor car for pay, either in cash or any other valuable consideration; or competed for a cash prize; who does not make his livelihood or any part of it, as a result of racing or driving, either as a demonstator, tester, or chauffeur; who has not otherwise received financial reward for engaging in competition; who has never been declared a professional by any sport-governing body or who, having been so declared, has been reinstated either by such body or by the racing board of the A. A. A."

All of the members of the sub-committee. Messrs. J. Dumont Thompson, chairman; Alfred Reeves, A. L. Riker and S. A. Miles, were present at the meeting of the board, which was held in the Association's New York offices on Monday last, 24th inst., when they submitted the result of their labors. The others in attendance were William K. Vanderbilt, Jr., New York; E. R. Thomas, Buffalo, N. Y.; Rossiter Worthington, New York; A. R. Pardington, New York; A. G. Batchelder, New York, and Frederick H. Elliott, secretary.

The revised rules were read and discussed and ordered printed. They now will be submitted to the absent members for suggestion. They will come up for final adoption at the next meeting of the board.

The Vanderbilt cup race also had a look up at Monday's meeting, and prospects were held out that it may be run this fall. Chairman Thompson reported that the Automobile Club of St. Louis and the Savannah Automobile Club, both were desirous of submitting propositions for the holding of the Vanderbilt cup race next fall, and Vanderbilt himself requested that the proposals from these clubs be investigated and placed before the board at an early date.

Rough Hewing in Ohio Legislation.

After considerable entangling argument relative to "schofurs," "chaffers," and "shufoors," the Ohio senate has decided that it does not know exactly what is contained in the automobile bill introduced by Senator Ward, and has sent it back to the commit-

tee for revision and reprinting. A fight was made for home rule for cities, but not with success. It was agreed that cities might determine what portions were closely built up, thus coming upder the eight mile limit, and the remainder was left at the fifteen mile limit. One senator wanted the annual license fee increased from \$2 to \$10. but a compromise was reached on \$5 per year. A provision put in by the committee preventing chauffeurs from getting a commission on supplies was stricken out as not germane to the bill. Senator West discovered indications of carelessness in drawing the measure which was copied from the New York law, and was full of references to "boroughs" and other features of the New York law not applicable to Ohio. The committee is now at work on the corrections.

May be Maryland Motordrome.

Mimetic Maryland has contracted "autodromstructitis." This is a malady causes persons to form companies to build mammoth velodromes for automobile racing only, none of which are constructed, however. The fever is is contagious. New Jersey has been the worst sufferer, but New York, Massachusetts, Pennsylvania, Ohio and even diminutive Delaware, have had attacks of it. Now comes Maryland. Senator Gorman has asked the legislature of that State to grant power to the Motorcar Racing Association to construct a motordrom. in the State and operate it. Senator James Young, Thomas A. Robinson, E. A. Cassi day are named as backing the project.

A. A. A. Ready to Test Anti-Chain Rule.

If any member of the American Automobile Association is particularly anxious to test the validity of the recently re-enated regulation of the New York Park Board prohibiting automobiles wearing tire chains, it will cost him nothing to do so. All he need do is to notify the office of the Association, 437 Fifth avenue, or Charles Thaddeus Terry, counsel for the American Automobile Association, 100 Broadway, New York, of his arrest, when the association will step in and defend him. In fact the A. A. A. will defend, without expense to those ar rested, any number of cases as may be adequate to test the validity of the enactment.

Easter Sunday for Jalisco Cup Race.

According to advices from Guadalajara, Mexico, the annual Jalisco cup race will take place on Easter Sunday, April 19th. It is stated that one of the contestants will be Joseph Tracy, who will drive a 90 horse-power Locomobile. The Jalisco cup race is Mexico's biggest sporting event, the prize being a costly silver cup donated by Alfonso Fernandez Comellera. The Mexican government allows the promoting club to close the roads on the day of the event, besides furnishing abundant troops to police the course. All the business houses of Mexico City declare a holiday during the races.

MOTORISTS CANNOT GET DAMAGES

Roads Need not be Made Safe for Them, Says Massachusetts Court—Automobiles not Carriages.

According to the Supreme Judicial Court of the Commonwealth of Massachusetts an automobile is not a carriage, and despite the fact that they pay special and extra fees ostensibly for highway improvement, it is not part of the authorities' duties to keep the roads safe for automobilists' travel. In other words, the provisions of law which make cities and towns liable for injuries sustained by carriages through defects in the roads do not apply to automobiles.

This wealth of judicial wisdom was evolved in consideration of an appeal made by the town of Ayer from an award made by a local court. William C. Doherty had sued the town for damages on account of damage to his automobile resulting from the condition of the road. Judgment for \$100 was given in Doherty's favor, but the award was set aside by the Supreme Court in a decision handed down on the 25th inst., in which Chief Justice Knowlton says:

"It hardly can be contended that locomotive cars of many tons' weight, propelled by gasolene or steam or electric engines, with complicated machinery capable of developing 50 to 75 horsepower and sometimes even more, are vehicles of a general kind as the carriages known to the legislators of Massachusetts in 1786."

This part of the decision was in reference to the highway statute originally enacted in that year requiring cities and towns to keep their roads safe and convenient for "travelers with their horses, teams and carriages."

The court says that to oblige cities and towns to put all highways through remote and seldom used sections into a condition to stand the strain of automobiles would be a burden heavier than they could bear; also, no reasonable expenditure of towns would be enough to make all roads safe and convenient for the use of heavy automobiles at all times of the year.

The court decides that the automobile is not a carriage with the meaning of the statute, and that any one can lawfully ride in them, but that "if the road is reasonably safe for travel generally, towns are not liable for a failure to make special provision required only for the safety and convenience of persons using automobiles or bicycles."

Lytle Changes His "Stable."

Herbert H. Lytle, so long associated with the Pope-Toledo racing "stable," has been engaged to drive an Apperson Jackrabbit in the Savannah stock car races next month. George H. Robertson will drive the other Apperson that is entered.



SCIENCE OF THE ROLLER BEARING

Alden Explains Reason for the Taper Roll with Two Ribs—Its Evolution in the Timken System.

Since the development of the anti-friction type of bearing has become, as it were, an art within an art, it follows that compara tively few engineers are really well informed on all phases of the subject, while the average layman has absolutely no comprehension of the theory involved in the construction of the various types answering to this description, even though the mechanical construction involved may be thoroughly familiar to him. The following paper, which was read by H. W. Alden, consulting engineer of the Timken Roller Bearing Axle Co., at the January meeting of the Society of Automobile Engineers, is therefore particularly informing, as showing in a general way the application of the selfaligning taper roller bearing to the uses of the automobile mechanism.

"There would seem no chance for argument that in the abstract a roll should be capable of carrying a greater load than a ball of the same external physical dimensions, granting that material and workmanship are identical and eliminating the question of alignment of the roll," says Mr. Allen. "Comparisons made in this article will assume a ball bearing using a curved surface for the cone with a radius of .7 the ball diameter. No distinction will be made between the annular or radial, and the so-called bicycle type of ball bearing. In the roller bearing the diameter will be assumed, same as that of the ball with length equal to diameter.

If we consider that, when a ball or roller is loaded, there is an infinitesimal flattening out at the point of contact, then the loadcarrying capacity, other things being equal, will be approximately proportional to the area presented to carry the load. We find that assuming the roll or ball and the cone to suffer a deformation of approximately one thousandth of the radius of the ball or roll, we get resulting areas in the ratio of approximately 71/2 to 1 for the roll and ball respectively. Now it is this remarkable showing that has tempted so many to experiment with the roller bearing. A search through the patent files of this country alone shows an almost unlimited number of attempts, very few, however, of which have ever come to light, and almost all of which have disappeared from view. Perhaps the majority of experimenters have tried the taper roll, which statement brings us up to our second point, namely, end thrust.

"The cases where a bearing is submitted to side load alone are possibly in the majority, but there are many cases—where the bearing has both side and end load to withstand. This is particularly true in the case

of the automobile, where perhaps the ma jority of the bearings have to stand thrusts. some of which, as in the case of wheels and bevel gears, are exceedingly severe. I think we sometimes fail to recognize the severity of this front wheel end thrust. When turning a corner of 25 feet radius at 15 m.p.h., which is by no means rarely done, the end thrust on that front wheel bearing which gets the maximum thrust is just about the same as its legitimate side load. The bearing then ought, by virtue of its design, to be able to take about the same load one way as the other. Now this is a strong point of the taper roller bearing. It can be shown that such a bearing, having an included angle of approximately 23 degrees for the cup, can carry the same end thrust load as side load for a given surface pressure normal to the roll surface. I find that there is a pretty general impression that, in the case of a taper roller bearing, having an abutting shoulder, all of the end thrust load is taken on this small shoulder. This is not the case, as can be shown by a simple illustration. Suppose a complete bearing to be subject to end thrust, but not to be in motion. Now. while the load is still applied, remove the rib or shoulder on the cone, by screwing it back out of the way, for instance, and it will be found that nothing happens. No matter what the load, the rolls refuse to change position. Now rotate the bearing slightly and it will be found that, so long as the rolls remain in correct alignment, there is no axial change in their location. When they get out of alignment, however, they begin to creep back up the cone.

"This brings us to the third point in question, that of alignment. And this, be it said, is the feature of greatest importance in all roller bearings. It is the rock on which many a roller bearing has gone down. In the case of parallel roller bearings, there is a peculiar but persistent tendency of the rollers to work endwise; not great, but still present. Now most parallel roller bearings have some member either on the cone or cup, or both, to limit this action, and sooner or later the roll brings up against this abuttment. So also in every taper roller bearing, the rolls bring up with a certain slight pressure against this same limiting element. It is at this crucial point that roller bearing designs and construction diverge. From this point all can be divided into two classes, those receiving this limiting effect at one end of the roll and those receiving it at both ends. Perhaps I should not have referred to the latter class in the plural as there is only one where this effect is obtained, i. e., receiving this limiting action at both ends of the roll. If the roll bears ever so lightly against an abutting shoulder at one end only, the tendency is to exert a slight retarding effect at this point which disturbs the alignment. With the correct alignment gone, there is then not pure rolling action, but a rubbing action, and furthermore the area of contact at once is greatly reduced. In other words, sliding friction has been substituted for rolling friction, and the contact area to carry the load has been reduced. The life of the bearing is therefore greatly reduced. When, however, this slight retarding effect is applied equally to each end of the roll, it is changed from a disturbing action to an actual guiding action.

"When the Timken company first began work on taper rolls, they, like all others before then and some since, had but one rib on the cone, and their earlier experiments were all failures as could have been predicted had the proverbial foresight been as good as 'hindsight.' Upon the introduction, however, of the two ribs, the align ment difficulty disappeared, and some seven years' experience covering many forms of application prove the fundamental value of these two ribs. Another feature of the taper roller bearing which appealed at the outset was the ability to take up wear with this form of bearing. We like to think that we:r does not occur with pure rolling con tact, but the bulk of the experience of users of bearings shows that in most cases wear does occur. If it cannot be taken up, it continues at an increasingly rapid rate, whereas, if it can be taken up, the bearing is ready to start out fresh again. Doubtless for some service, size and material can be chosen to eliminate wear from practical consideration. These cases are limited, however, and even in such cases a larger amount of material must be used than would be required if some wear could be tolerated. On the whole, then, from a practical standpoint, the taper roller bearing using two ribs has good reason for its existence, because of its area of contact giving large side load capacity; its large inherent and thrust capacity; its insurance of correct alignment, and its adjustability for wear."

Sparks Tell Difference in Steel.

To the average automobile mechanic, all steel is pretty much alike until he attempts to work it either by hand or in the lathe, when he immediately discovers that there is a vast amount of difference between steel and steel. In this connection it is well to remember that the so-called "high speed steel" may be distinguished by its tendency to develop red sparks when pressed against an emery wheel, while the ordinary tool steel gives a shower of white sparks under similar circumstances, as does machine steel.

Short Circuit for the Magneto.

Wherever the magneto is employed in connection with a double ignition system, it is important that the controling switch shall include means of short circuiting the magneto when it is not in use. If this provision is not properly carried out there is danger of breaking down the insulation of the armature windings.

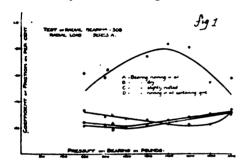
"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.



CARE OF THE BALL BEARING

How Lack of Lubrication Affects Its Running—Effects of Rust and Grit as Shown by Tests,

There is a general impression extant among automobile users, that, whatever may be the effect of neglect and misuse upon a bearing of the plain cylindrical type, the average ball bearing may be run without oil, with its parts badly rusted, or even clogged with grit, without seriously affecting its efficiency. This impression is fostered by the fact that even under the most adverse conditions, the ball or roller bearing cannot "set" as may happen with the plain bearing when subjected to abuse. An accurate, and enlightening demonstration of the mistake of supposing that the ball bearing requires no attention, and will run as well under poor as under good conditions,



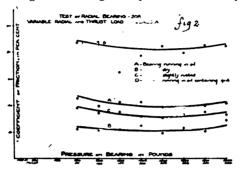
was supplied by a paper read before the Society of Automobile Engineers recently by Henry Hess.

Taking a bearing of the two-point contact, annular type ordinarily used in wheel hub bearings, several tests were performed with the idea of determining the effects of various running conditions upon it, both normal and abnormal. "In a hub the load will be purely radial, i. e., at right angles to the axle when the car is going straight ahead," says Mr. Hess. "When rounding a curve, or weaving from side to side an end thrust, parallel to the axle, will be imposed in addition. Properly mounted and taken care of, the bearing will be amply lubricated and kept free of rust and grit." Because not all bearings are "properly mounted and taken care of," as well as "amply lubricated and kept free of rust and grit," the tests were made to include such improper conditions as might be assumed to result from improper use.

Briefly, four sets of tests were carried out embodying radial loads, combined radial and thrust loads, and thrust loads only. For each of these conditions, four sets of trials were made corresponding to conditions of (A) copious lubrication; (B) practically no lubrication; (C) with rust, and (D) with grit; these tests were repeated under each load condition. The loads ranged from a low load as compared with the capacity of the bearing to a very decided overload. The

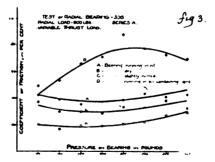
radial load started at 600 pounds and was raised by 200 pound increments to 2,000 pounds. The thrust loads ranged from 50 pounds to 400 pounds by 50 pound increments. The speed was taken at 300 r.p.m., this corresponding approximately to a car speed of 30 miles per hour.

Copious lubrication was provided by allowing the bearing to dip into a relatively



large reservoir of oil. For dry running the bearing was rinsed out in gasolene and then dried out in an air blast; this left a very slight oil film, not perceptible to the touch, but nevertheless present. After this test the bearing was rusted in water until a light coat was deposited on all surfaces. Owing to the high finish of the balls and races, the rust film on these was not thick; on the separators which are not polished, the rust was much heavier and interfered decidedly with their elastic action. Grit was provided by throwing sharp building sand between the races.

The tests were carried out by means of a special friction measuring machine capable of measuring the force of the frictional resistance due to radial loads up to 15,000 pounds, of thrust loads up to 10,500 pounds, and of combined radial and thrust loads in any ratio within these limits, and at speeds ranging from 200 to 2,000 r. p. m. The accompanying curves were plotted from the



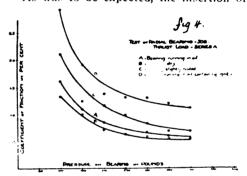
results of the various tests. Of that shown in Fig. 1, the author says:

"The friction (always referred to the bore of the bearing in order to permit of ready comparison with the friction that occurs in pl: in journals at the bore or shaft surfaces) ranges from 0.21 to 0.25 under copious lubrication (A). The dry running curve (B) is parallel, and, curiously, lies about 10 per cent. lower. The difference represents not the difference in bearing friction, but that of the relative resistance of the copious on supply and the slight film left after the oil was washed out in gasolene. It would not

do to conclude that this justifies the cutting out of oil, as is not infrequently advised; (side from other considerations, oil, and plenty of it, is necessary as a rust preventative.

"Curve C, with the bearing rusted, shows at first about 50 per cent, increase in fric tion, and then, very surprisingly, a gradual drop, curving down to the best values of A and B; but toward the close rising again sharply. An examination of the races involved shows that the initial higher friction was due to the rust, that, as this was worn off, the friction dropped and that the roughening due to the rust having destroyed the high polish and the truth of the ball and race surfaces was attended by an increasing breakdown of these surfaces, as indicated by the final fast rise of the friction. Prolonged running would undoubtedly have confirmed the road exper ience of the very serious influence of rust on bearing life and endurance.

"As was to be expected, the insertion of



grit raised the friction very decidedly. The readings varied widely, so that the average curve, D, will be seen to lie quite far from some of the points. As the run was started with the lower loads, and as it took some time to bring about an even distribution of the crudely inserted grit, the friction rose as the grit involved more of the surfaces; the drop after that is accounted for by the gradual working out of the grit and to the grits being worked down and partially destroyed by the wearing action of the balls. In an automobile hub the grit would be more serious since it could not readily escape. The friction due to grit and rust tends to draw the end plates and separators under the balls, and as these two destructive agents wear down the parts the separators may be, and occasionally are, drawn under the balls. That means a destruction of the separators, while the violent wedging also occasionally causes the outer race to be split.

"Fig. 2 gives the friction of the bearing carrying simultaneous radial and thrust loads, increasing simultaneously. A comparison of values under the condition of good lubrication, A, between Figs. 2 and 3, shows that a thrust load of 14 of the simultaneous radial load about doubles the total frictional resistance, and that, as there is no pronounced upward trend within the load limits advocated, such combined loading is good practice. The curves of Fig. 3



for a constant radial load of 800 pounds, and a variable thrust load of from 50 to 400 pounds, confirm the deductions drawn from Fig. 2. The advisability of submitting this two-point type of radial bearing to thrust loads has been frequently questioned, and occasionally even the admissibility of doing that has been denied

"Fig. 4, gives a series of curves showing the friction in the conditions, A, B, C, and D. It will be seen that in every case the friction falls with an increasing load. It is generally reasoned that under thrust the balls must wedge between the curve races. Were that true, then the friction should not only be high, but even though not equally high under all loads, certainly not decreasing under increasing loads. The curves bear out my reasoning in explanation. We know, of course, that under load there will be a deformation of the shape of the balls and races, and that the theoretical point contact is actually a surface contact of small area. I assume that this surface has an average inclination which gives a blunter wedge than the geometrical angle of the theoretical point contact. . . . As the load increases the deformation must increase; an increasing bluntness of the wedge angle with increasing load should therefore be accompanied by a decreasing frictional coefficient. This reasoning is confirmed by the trend of the curves of Fig. 4. Also, it has been observed that the thrust-carrying capacity of the heavy type of radial bearing is relatively less than that of the medium and light types. Now the heavy type has much larger balls and these will consequently deform less under heavy loads; that means a smaller change from the theoretical wedge angle, and, therefore, a relatively greater friction; so that this observed fact may be taken in further confirmation of my reasoning."

Among his conclusions, he presents these important points: "Simultaneous radial and thrust loading is permissible and does not result in a material increase of friction as compared with radial loading only.

"The bearing should be copiously lubricated; easiest running will be had with the least viscous lubricant; that, however, must not be so light as to escape readily, but must be retained by the mechanical arrangement of the hub.

"Rust must be rigidly excluded, as it will result in breakdown of the bearing surfaces and of the carrying capacity.

"Grit must be rigidly excluded, as it will result in a wearing away by grinding of the balls and races.

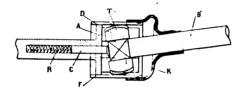
"As between rust and grit, the former is the more dangerous, since it involves the destruction of carrying capacity, while grit merely brings about a faster wear than is desirable. Rust and grit are nearly always found associated, as the conditions admitting the one generally admit the other. Their combined influence is decidedly bad. Fortunately, both can be kept out by means which are available, simple and cheap."

THE MOTOR WORLD

CUSHIONING THE END THRUST

Simple Method Adopted in Double Jointed Propeller Shaft—Maintains Position of "Floating" Member.

In the construction of the universal jointed propellor shaft of the live axle car, it is, of course, necessary to provide for flexure in the direction of the vehicle's length as well as in the vertical and lateral senses, since it is impossible to maintain an absolutely fixed distance between the axle and the gear box or clutch at all times. On this account it is customary to provide a slip joint of some sort either directly in the cardan joint, or in the shaft itself. In some cases one of the couplings of the cardan joint is made to slide loosely over one end of the shaft, which is squared. In others, the coupling itself is so constructed



that a certain amount of end play is permitted.

In certain instances where a double jointed shaft is employed, two such slip joints are provided, one at either end. In such a case, there is a tendency for the "floating" member of the group to work to one end or the other, thus locating the sliding movement entirely at the opposite end of the shaft. To guard against this tendency an elastic medium, such as a spring or springs, is frequently introduced to preserve the distance of the slidable member from its limits of travel under ordinary circumstances, and maintain the full elasticity of the system.

The arrangement here illustrated is designed to accomplish this, and has been adopted for the 1908 model of a well known foreign car. Because of its simplicity, it well illustrates the purpose it is intended to fulfill, as well as showing the drawback obtaining where no such provision is made. The joint consists of the flanged driving shaft, A, which is slotted to receive the bearings, D, for the trunion, T, which is a part of the driven shaft, B, in which the flexible provision is made. The shaft, A, is drilled out for a short distance, and carries the plunger, C, which rests against the end of the shaft, B, and is backed by the helical spring, R. The joint itself is completely housed by the shell, F, and the flexible protector or boot. K.

From the illustration, it is plain to see that the shaft, B, may approach or recede from the end of the shaft, A, within certain limits, yet without affecting the action of the joint. The same applies to the second

joint at the opposite end of the shaft, B, which is similarly mounted. The function of the spring, R, is to keep the shaft equally placed between the two joints, which it does by working against a second and similar spring mounted in the other joint. The effect is to cushion the longitudinal movement of the shaft without in the least affecting its suitability in the main purpose of supplying a supple connection between the motor and the driving axle.

To Make a Flexible Plug Connection.

One of the frequent annoyances that the motorist is subject to is the breaking off of the secondary terminal at the spark plug end. While the main cause of this is the vibration of the wire, a contributing cause may be found in the fact that the terminal is soldered to the wire making a stiff and solid connection at a point where flexibility is desirable.

A simple and thoroughly effective way of obtaining a good contact, and yet securing one that is absolutely flexible, is by coiling a fine brass spring wire, say about an 18 or 20 gauge, around a lead pencil, making a spring 3 or 4 inches long, the end of the coil spring thus obtained may be soldered to the secondary wire and the other end of it either soldered to a terminal or shaped to meet the requirements of the spark plug. The result of this is to obtain a flexible end that will permit of any amount of vibration and will not offer sufficient resistance to cause the wire to break.

To Prevent Trucks from Skidding.

At first thought one is not likely to believe that automobile trucks for heavy delivery, fitted with huge twin tires are apt to cause much trouble from skidding, but when it is realized that, though these ponderous vehicles are designed for slow speed only, they obtain a high rate of speed when going down a hill, the question of some antiskid devise is of prime importance.

Possibly the simplest and yet most effective preventative that can be obtained is an ordinary chain running around the wheel between the two tires. If it is sufficiently loose so that none of the driving strain comes on it there would be comparatively little wear, but when the car begins to skid because of the sudden application of the brakes or for any other reason, the side movement would bring the chains into play and effectually stop it.

Tire Trick on Second Hand Cars.

Purchasers of second-hand cars besides making a thorough examination of the mechanical portion of the prospective investment, would do well to investigate the condition of the tires. It is an easy matter for the dishonest dealer to insert old and practically useless inner tubes in casings, which to all appearances are in good condition. Furthermore, re-treaded tire casings are not always what they purport, or appear to be.



RESTRICTIVE LAWS FOR [GERMANY

Demand Made in Reichstag "for the Protection of the Public"—Government Promises Immediate Action.

Automobile legislation seems to be worrying the members of the German Reich stag as much as it does legislators in America, according to cable dispatches from abroad. Last week the question of automobile regulation in Germany came up in the Reichstag and provoked considerable discussion, the assurance being given by the government that it would put forth a stringent measure "for the protection of the public."

Prince zu Schonaich-Corolath began the discussion by calling upon Chancellor von Bulow to protect pedestrians by the prohibition of road racing, confining these contests to inclosed tracks. He also demanded the suppression by legislative measures of noxious odors arising from motor cars and examinations for chauffeurs, who should not receive licenses until they had driven at least 6,250 miles under the supervision of qualified instructors.

Herr Nieberding, the Secretary of State, replied, amid applause from all sections of the house, that a bill was ready for introduction in the Reichstag making the owners of automobiles fully responsible before the civil courts for accidents, while negligent drivers would be subjected, according to its provisions, to severe penalties, including fines and imprisonment.

Chauffeurs, henceforth, would be compelled to undergo examination relative to their technical knowledge of motor cars and their trustworthiness and skill as drivers. The questions of road racing and noxious odors will be left to the decision of a committee.

The government's action, it is stated, has been induced by recent official statistics of automobile accidents in Germany, which claim to show that from October, 1906, until October, 1907, there were 4,931 motor car accidents, involving 145 deaths and injuries to 2,419 persons, half of these occurring in Berlin. In 93 per cent. of the cases passenger cars were responsible. Among the victims 8 per cent. were the occupants of the cars and 76 per cent. were pedestrians

New Yorkers to Circle the Earth.

Around the world automobile trips seem to be increasing in popularity. Burton S. Castles, a member of the New York Cotton Exchange; Frank Hubbard, partner of Charles G. Gates, and Clarence Hertie, have announced that they intend to start out next month for a tour around the world, taking in Japan, China and India. The three New York financiers will not attempt to break records, however, as they expect to be gone

more than a year. Their avowed object is to have a good time, and to explore interesting and odd corners of the globe. They will use an American made car, and will take with them an American chauffeur and mechanic.

Would Confiscate Too Speedy Cars.

Like many of his colleagues in Massachusetts, Judge Lloyd B. White has decided views upon the question of automobile legislation. Judge White thinks a law should be passed prohibiting the manufacture and sale of automobiles capable of more than twenty miles an hour, and that the State should confiscate all cars that can go faster than this.

Judge White made known his ideas last week in refusing to postpone sentence on Dr. Charles W. Carey, of Quincy, found guilty of driving his car faster than the law allows in Hingham last September. His judgeship sat in Superior Court at Plymouth and delivered his opinion of automobile speeding when he said:

"Automobiles and automobilists will never be regulated until a law is passed absolutely prohibiting the manufacture and sale of machines capable of running at a rate of speed greater than 20 miles an hour. A way to effect this is to have the State confiscate all automobiles found within the commonwealth which have been proven to have been run at a greater speed than this."

After relieving his mind of this peroration his judgeship White fined Dr. Carey \$25. The latter's attorney took exception to the ruling and took an appeal of the case to the Supreme Court.

Minneapolis Adopts Its New Ordinance.

As was expected, the Minneapolis city council passed the automobile ordinance which will require that hereafter automobilists and motorcyclists renew their city licenses each year, the charge for a renewal being 50 cents, instead of \$2, as it was previously the case. Licensees will be given the privilege of taking out the same number each year, upon payment of 50 cents after the first year. Motorists will have to carry two tags, one of the State and one of the city, the latter containing the name "Minneapolis" in addition to the number of the tag and the year of issuance.

Jail for a Pittsburg Scorcher.

"I'll fine you six cents——" began Judge Brown, in a Pittsburg court, and Charles N. Smith, a chauffeur who violated the speed ordinance, smiled and picked up his hat to go.

"And," continued the judge, "sentence you to thirty days in the county jail!"

Smith forgot to smile as he was being led away. It was one of the first jail sentences for scorching meted out in Pittsburg.

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau St., New York City.

TO ROUT RIOTERS OR RAIDERS

Quaker City Motor Club Developing Military Spirit—Proposed Corps to Serve City, State or Nation.

Although Philadelphia has long been considered slow, the Quaker City Motor Club of that city is at least several minutes ahead of the calendar. It is ready to tackle either hoodlums, strikers, or Turks, in fact, it is ready for r-e-a-l w-a-r, if need be. Its advancement and ambitious valor is taking the form of a movement to organize a volunteer corps to render service to either city, State or nation in the suppression of lawlessness, or if need be, in repulsing foreign invasion in time of war. Thus it may come about that in the City of Brotherly Love, in a State founded by a member of that religious sect which opposes war, Uncle Sam's belligerent ability will be increased by the creation of an automobile auxiliary.

H. C. Harbach, the club's secretary, has sent to President Roosevelt a communication in which the plan is outlined briefly and which urges the president to accept the services of such a body. Accompanying the letter, a copy of which was sent simultaneously to Governor Stuart of Pennsylvania, and to Mayor Reyburn, of Philadelphia, was a preamble and set of resolutions adopted at a meeting of the club's board or governor's held on Thursday night last.

The preamble and resolutions which accompanied the letters, read as follows:

"The Quaker City Motor Club of Philadelphia, First Volunteer Motor Corps.

"Preamble: Whereas, The American automobile has thoroughly demonstrated its utility and reliability as a vehicle of rapid transit; and.

"Whereas, The march of progress demands both speed and endurance for all common carriers; and,

"Whereas, The automobile is the practical forerunner of advancing civilization:

"Now we, The Quaker City Motor Club, do hereby propose to enlist and enroll from among our members in good standing a sufficient number of capable and able-bodied men who shall agree to act as a volunteer motor corps.

"This volunteer motor corps is to offer its services and machines, through the Quaker City Motor Club, free to the City of Philadelphia, the State of Pennsylvaniaa nd the United States Government as an auxiliary force, in all cases of urgent need or dire necessity for the suppression of law lessness and insurrection, or in the graver duty of repulsing foreign invasion in time of war. And,

"Whereas, The Quaker City Motor Club is only actuated by true patriotism and love of country, we most humbly pray your best consideration and prompt acceptance of this sincere proposal."

AIRING RHODE ISLAND MEASURES

Judiciary Committee of Legislature Gets
Points for Automobile Laws—Things
Said at a Hearing.

There was interesting variety in the protracted hearing given at Providence, R. I., en the 18th inst., by the House judiciary committee, which at present has charge of tirree new automobile measures, introduced in the State legislature. These measures consist of one introduced by Olney Arnold, providing severe penalties and specifying a definite speed limit; one introduced on behalf of the Rhode Island Automobile Club; and a third, introduced by Mr. Phillips of Coventry, which proposes a radical change in the existing law by placing the control of automobiles in the hands of the State board of public roads, instead of the Secretary of State.

the automobile club's bill was advocated by Col. Frank W. Tillinghast, of the club's special legal committee, who explained that the measure aimed to amend in some particulars the existing law which he declared to be in the main a satisfactory one. He condemned the proposition, embodied in one of the bills, which asks for an annual tax on automobiles, saying that such a thing should be labeled a means for raising money and not a means of regulating automobiles. In regard to licenses for operators, the speaker declared that annual licenses were not just or desirable.

In criticism of the bill advocated by Col. Tillinghast, it was shown by Mr. Hogan that, under provisions regarding the powers of the Secretary of State in revoking licenses, a man convicted of violating the law would have two court trials, a thing which none other could get. Col. Tillinghast admitted that this was true, and that the Secretary of State would not have power to revoke a driver's license until final conviction. But he expressed opposition to vesting the power of revocation in the courts of the State. He declared that it should be in a central body. The Secretary of State, in the speaker's opinion, was the best official to consider this problem.

"You are not dealing with a lot of lawtreakers; you are only providing against a few reckless persons," said Col. Tillinghast.

After reading the speed regulations provided for in the club's law the speaker continued:

"If every person drove his machine reasonably and properly there would be no complaints from any one about reckless operation. Upon this point there has been considerable discussion. We provide that 15 miles per hour in any city or compact section of any town or village is the speed limit. But we further limit this provision by saying that it shall be reasonable and proper at all times. Outside of these sec-

tions we do not fix any mile limit, but I think that 'reasonable and proper' fits the case exactly, and is what is desired. Other States are repealing their mileage limits because they find them unsafe."

Following Mr. Franklin, of Newport, who spoke in favor of having the owner of a carheld equally responsible with the man who runs it, Col. Tillinghast again addressed the committee in explanation of the penalties provided for in his bill. This section places a fine of from \$10 to \$500 and imprisonment from 40 days to one year, in the discretion of the court. He showed that if a more severe penalty is provided for a second offense than for first, a man might get unjust treatment in court. The speaker explained this provision by saying that the second offense might be merely a technical offense and not worthy of a severe penalty.

The stock argument of making automobilists pay for the added cost of road maintenance charged against their vehicles figured in the hearing as a matter of course, and was combatted by Fred E. Newell of Central Falls in a vigorous speech, during which he said:

"Now, Mr. Chairman and gentlemen of the committee, I hope you will give this bill due consideration, before recommending it, for it looks to me as if there was a movement on foot to make one of the greatest blessings that progress has ever conferred upon man so expensive that none but the wealthiest people can afford to own one. Now this bill states that a person owning an automobile must pay each year not only a license but a registry fee for every machine he owns. Now I own three, not that I want to; I'd like to sell two of them. 1 am obliged to pay three fees and one license fee, to say nothing of three or four kinds of insurance on them. Is this right; is it a square deal? A man can own a team of horses and all kinds of wagons from a tipcart to a six-horse moving wagon, yet he pays nothing. He wears out the roads and millions of dollars have been spent on the roads and streets for the wear and tear of his wagons and the nuisances of his animals long before the automobiles were heard of, but I never heard of any special tax or license they had to pay."

Discussion of the speed limit brought out a number of varying suggestions and was marked by a touch of the ludicrous in the declaration of H. H. Whaley, of North Kingston, who said automobilists go so fast through his town that they can't stand the wind on their eyes. "They can't look at the scenery because they go so fast," he said. "Once I went out to see the number of a machine, but gracious! the whole thing went by so fast I couldn't even see the machine itself!" Whaley favored a speed limit of 15 miles.

Another of the amusing points of the hearing was the suggestion made by Lellan J. Tuck, judge of the Tenth District Court of Pawtucket, who declared against the use of horns, and said: "An autoist who is

equipped with a big horn or a siren feels that because he blows that horn every one else should get out of the way. Therein lies the trouble. I would advocate that no automobile be allowed to carry any horn or signalling device. If this was done the auto driver would be obliged to go at a reasonable and proper rate of speed at times where such is needed. Because a man can blow his horn he thinks he has a clear right of way. Take away a horn and the driver will be absolutely obliged to go slowly, and that is what we desire."

New York and Massachusetts automobilists were rapped by F. O. Strobridge, special automobile constable of North Kingston, who voiced the opinion of the town council in declaring the limit of fifteen miles too high, and added, "Rhode Island autoists are mostly gentlemen; it is the people from Massachusetts and New York that we have to look out for.

Speaker Burchard, of the House, who was the last to address the committee, spoke in favor of a graded tax on automobiles, grading the tax by the power of the respective cars, and fixing a minimum rate for cars used solely for commercial purposes.

The Horse was on the German.

When Herman Waubitzrider, of the Spring Garden district, Philadelphia, discovered the hood of an automobile snugly covered with a heavy lap-robe, he threw up both hands in amazement, and after stopping and pondering in his astonishment he decided that the curiosity aroused in him must be satisfied.

He determined then and there to make an investigation and ascertain, if possible, just what kind of an animal was being kept warm beneath the blanket. Approaching the machine, with all due caution, he raised the blanket and was peering beneath its folds when the owner of the car happened along.

Herman was in trouble in a moment, for the owner-chauffeur was inclined to think the man was bent on some mischief. He questioned the Spring Garden avenue German, and burst into laughter when the latter attempted an explanation.

"Vat iss?" inquired Herman. "No horse, no head, nottings to get cold. See, dere is notting but big iron box. Vat iss?"

It was explained that the blanket was used to protect the water in the radiator from freezing, the explanator adding that it also was done to keep the joints from getting stiff. Herman took another look, and said:

"Dot's alride about dot, but I can'd see vy iss it dot automobiles must vear blankets ven dere is no horse."

Thinking the motorist was trying to have fun with him, Herman stalked away in high dudgeon. Herman's address is not given. It probably is located in a Quaker fancy, but the fact does not spoil the readability of the story.

The Week's Patents.

874,401. Ball Bearing. Freidrich Greiner, Berlin, Germany, assignor to The Firm of Maschienbau-Anstalt Altenessen, A. G., Altenessen, Germany. Filed July 23, 1907. Serial No. 385,144.

1. A ball bearing comprising in combination an inner ring, an outer ring, large balls in the annular space between said rings, two flat rings having a plurality of slots arranged between said rings covering said balls in said annular space, a plurality of bridges having holes and small pins on their ends arranged between said balls and at right angles to said flat rings, said pins passing through said slots and connecting said flat rings together, and small balls in said holes between said large balls.

874,404. Variable Speed Power Transmitting Gear. Peter Hesselins and John Jaderlund, Chicago, Ill. Filed March 12, 1907. Serial No. 361,959.

1. In a variable speed power transmitting device, the combination with two rotative shafts arranged at an angle to each other, of a plurality of annular concentric gears mounted on one shaft, a plurality of gear wheels meshing therewith and loosely mounted on the other shaft, means for separately locking said gear wheels to their shaft, an intermediate shaft and two connected gears mounted thereon, one of said two connected gears meshing with a gear wheel on said gear wheel bearing shaft and the other meshing with one of said annular gears for the purpose set forth.

874,405. Automobile. Harry L. Ide, Springfield, Ill. Filed Aug. 15, 1906. Serial No. 330,746.

1. An automobile including its frame mounted upon wheels, a rocking cradle mounted upon the frame, and an operating engine mounted upon the cradle, said cradle having two bearings displaced longitudinally of the automobile and disposed substantially midway between the sides of the frame.

874,419. Clutch Mechanism. William R. McKeen, Jr., Omaha, Neb., assignor to Edward H. Harriman. Arden, N. Y. Filed Oct. 2, 1905. Serial No. 280,922.

1. In a device of the class described, in combination, a pair of clutch members provided with means adapted on said members being thrown into engagement one with another automatically to tend to draw the same together, said means comprising a plurality of teeth upon each member, the space between contiguous teeth upon a member increasing in a direction toward the roots thereof.

874,450. Gas Engine. Andrew J. Spicer, Franklin, Ind., assignor, by mesne assignments, of one-half to Elmer C. Russell, Indianapolis, Ind. Filed Oct. 22, 1906. Serial No. 340,011.

1. In a gas engine, the combination, with a combustion chamber having a smaller tubular extension, and a piston mounted in said chamber, of a cooling chamber surrounding the tubular extension, said cooling chamber having a valved inlet and outlet communicating with said chamber at one side of the tubular extension, and a passage forming a communication between that side of the piston opposite the combustion chamber and the cooling chamber at that side of the tubular extension opposite the inlet and outlet, whereby a cooling stream of air is propelled in alternately opposite directions through the cooling chamber, said

cooling stream of air being divided and deflected by the tubular extension.

874,484. Vehicle and Spring Thereof. Elmer L. Brillhart, Pentwater, Mich. Filed Sept. 27, 1906. Serial No. 336,429.

1. A spring comprising oppositely disposed leaves each fulcrumed on the top of the other at the free extremity thereof.

874,520. Change Speed and Reversing Mechanism. George W. Marble, Chicago, Ill., assignor of one-half to William R. Donaldson, Chicago, Ill. Filed Jan. 10, 1906. Serial No. 295,372.

1. A friction speed transmission device embodying a continuously rotating shaft, a wheel rigidly secured thereon having a friction face at its hub and within its periphery, an oppositely facing friction disc or wheel slidably engaged upon the shaft and having a friction face adjacent the hub and within its periphery, a shaft journaled between said discs or wheels, a friction wheel rigidly secured on each end thereof, one extending into position to engage either friction face of the rotatable friction wheel, the other to engage either friction face of the rotatable friction wheel and means for shifting said friction wheels into engagement with the respective friction faces.

874,563. Power Transmission Device. Andrew Boulanger, Los Angeles, Cal. Filed March 26, 1906. Serial No. 307,984.

A power transmission means comprising a driving shaft, a plurality of gears rotata-bly mounted on the driven shaft and continually in driven connection with the driving gears, clutch drums connected to the respective driven gears and having rims with internal friction faces, clutch members mounted on and connected to rotate with the driven shaft and extending within the faces of the aforesaid drums, each clutch being provided with an elastic device in the form of a nearly complete ring, one end of which is fastened to the inner clutch member, the said ring extending within the annular drum rim and having an inclined end, an actuating member in each clutch moving radially and provided with an inclined portion for engaging the inclined end of the clutch ring to distend said ring, and an operating bar axially movable in the driven shaft and provided with an inclined portion to engage the said actuating member of each clutch, said operating bar being cylin-drical and having flatted portions on each side of its inclined portion, said bar having notches in its flatted portion and a spring actuated device having a projection for engaging in said notches.

874,627. Transmission Gear for Automobiles. Charles W. Smart, Memphis. Tenn. Filed April 30, 1906. Serial No. 314,576.

1. In an apparatus of the class described, the combination with a driving shaft, of a friction disc arranged for rotation on said driving shaft, a pair of shafts mounted for rotation, one each side of the friction disc, and one of which shafts is arranged to be shifted longitudinally, and both of the shafts being driven from the driving shaft, a pair of opposed friction wheels mounted on the shafts and engaging on the side faces of the friction disc, means whereby one end of one of the shafts is moved to and from the friction disc, and means arranged upon the longitudinally moving shaft and upon the shaft carrying the friction disc for reversing the motion of said disc when the longitudinally moving shaft is shifted from one position to another.

874,657. Variable Gearing. Franz Burger, Fort Wayne, Ind., assignor of three-

fourths to Henry M. Williams, Fort Wayne, Ind. Filed April 17, 1907. Serial No. 368,722.

1. The combination with a wheel having a plurality of concentrically arranged rings of friction surfaces theron and channels between said rings, of a pinion having a friction surface to engage said friction surfaces.

874,693. Explosive Turbine. Frederick W. Luedke, Trenton, N. J. Filed Aug. 15, 1904. Serial No. 220,846.

1. In a device of the class described, the combination with a turbine wheel, of an explosion cylinder having an exit adapted to deliver its charge to the turbine wheel for operating said wheel, means controlling the passage of the exploded charge through said exit to the turbine wheel, and means for exploding a charge within the cylinder, said charge exploding means being adapted to release the means controlling the passage of the exploded charge to the exit.

874,767. Shock Absorbing Device. George S. Hill, Bradford, Mass. Filed March 5, 1906. Serial No. 304,155.

1. A shock absorber for vehicles, comprising a drum and a band engaging the same, constituting co-operating frictional members, one of which is attached to the spring supported body of the vehicle and the other to the supporting base, said members being constructed and arranged to loosen the band when the body and base approach each other and to tighten the band when they separate, and adjustable means for limiting the loosening movement of said band

874,802. Vehicle Steering Gear. John P. Simmons, San Francisco, Cal. Filed March 20, 1907. Serial No. 363,368.

1. A steering mechanism including a fixed wheel axle having horizontal disc-shaped tables at each end, and ball-bearings fitted around the lower side of said discs, a chambered wheel center within which said horizontal bearing is contained, means entering one side of said chamber and bearing directly upon one side of the disc shaped table ends of the axle to maintain a bearing contact between the opposite side of the chamber and the contiguous side of the table ends, a vertically disposed ball bearing, a wheel hub within which it is fitted, said bearing enabling the wheel to turn freely around the horizontally adjustable portion.

874,811. Motor Vehicle Driving Gear. George A. Weidely, Indianapolis, Ind., assignor of one-half to Harold O. Smith, Indianapolis, Ind. Filed June 1, 1907. Serial No. 376,825.

1. In an automobile, the combination, with an axle casing and a driving pinion, or an inner bearing and an outer bearing for said pinion, and suporting means for both of said bearings fitted upon the same portion of the axle casing.

874,844. Detachable Wheel Rim. Raymond Healy, Brooklyn, N. Y. Filed Dec. 28, 1906. Serial No. 349,759.

1. The combination of a tire carrying rim, a felly, a pair of side plates having inclined bearing edges for the rim expanded outwardly and having their inside faces between the felly and rim flush as described, and a pair of circumferential liners superposed in the space between the felly and inside of the rim, all as described to form an expansible solid bearing for the rim extending continuously from the outside of the edge of one plate to the outside edge of the

opposite plate, as and for the purpose described.

874,852. Differential Gearing. Wilhelm Lorenz, Karlsrube, Germany, assignor to The Firm of Daimler Motorengesellschaft, Unterturkheim-Stuttgart, Germany. Filed June 17, 1907. Serial No. 379,392.

1. A differential gearing comprising a driving shaft provided with a cylindrical part and a central differential shaft carrying a toothed wheel, coaxially arranged with the driving shaft, and a second differential shaft inclosing the central shaft, and provided with a casing having teeth, and planet wheels carried by the said cylindrical part and meshing with said teeth and the said central toothed wheel.

874,878. Vehicle Steering Device. Edward J. Vraalstad, Buffalo, N. Y. Filed May 29, 1906. Serial No. 319,367.

1. In a steering gear for vehicles, the combination with a steering rod, and a duplex screw thread thereon, of two nuts, one for each thread, a swinging member carried wholly by said nuts and actuated by the movements thereof.

874,913. Starter for Explosion Motors. Herman J. S. Lewis, New York, N. Y., assignor of one-half to John H. Dale, New York, N. Y. Filed March 4, 1907. Serial No. 360,346.

1. A spring operated starter for explosion engines comprising two parts or members independently revoluble on the crank shaft of the engine, a power spring impelling said members angularly with respect to one another, and a lever pivoted coaxially with said members and movable in one direction to engage one member to the shaft and movable in the other direction to engage the other member to said shaft, said directions being in the plane of rotation of said shaft, and means for holding the nonengaged member stationary in each case.

874,955. Sparking Mechanism for Explosion Engines. Louis A. Gianoli, Paris, France. Filed Jan. 29, 1907. Serial No. 354,782.

1. The combination with the rotary and stationary elements of a magneto generator, of a stationary insulating ring having an internal rack and contents, a rotary gear connected to said rotary element to be driven thereby, a planet gear of conducting material meshing with said rack and rotary gear, and adapted in its planetary movement to make electrical connections with said contacts, and a wire in which current is induced by the relative movement of the rotary and stationary elements, said wire being electrically connected to said rotary gear, substantially as described.

874,963. Holder for Automobile Top Bows. Stephen D. Hunter, Philadelphia, Pa. Filed Aug. 24, 1907. Serial No. 389,-940.

1. A holder for the bows of an automobile top, comprising a rod, a member carried at one end of the rod against which one outside bow is adapted to abut, a series of spacing plates supported by, and freely movable along, said rod and adapted to be arranged alternately with respect to the bows, and an end plate carried by the rod and adapted to abut against the other outside bow and means to move the end plate toward said end member, thereby moving all the plates along the rod and clamping the bows.

874,964. Pneumatic Tire Protector. William M. Jamieson, Te Papa, near Onehunga. New Zealand. Filed July 11, 1906. Serial No. 325,728.

1. In a pneumatic tire protector, the combination of a box having a transversely corrugated plate adapted to be fitted to said tire, and means for securing a solid tire to the box.

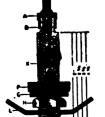
874,978. Power Transmission Gearing. Vernon D. Munger, Beach City, Ohio. Filed March 29, 1907. Serial No. 365,342.

1. A power transmission gearing comprising a drive shaft, beveled pinions fixed thereon, a longitudinally adjustable driven shaft, a beveled gear wheel fixed thereon,



ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE Trade Mark Registered April 30, 1895



SIMPLE AND ABSOLUTELY AIR TIGHT

■ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for $2\frac{1}{2}$ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York

and other beveled gear wheels mounted on said driven shaft and movable longitudinally thereon, each gear wheel being nested in the next gear wheel of larger size.

874,989. Steering Gear. George G. Porter, Syracuse, N. Y., assignor to The Porter-Cable Machine Co., Syracuse, N. Y., a Corporation of New York. Filed June 10, 1907. Serial No. 378,202.

1. In combination with a steering member; a steering post; a gear secured to a steering member; a fixed gear provided with a greater number of teeth than the first gear; a pinion meshing with both of said gears; and connections between the steering post and the pinion for moving the latter over the gears.

875,053. Pneumatic Tire. Charles E. Duryea, Reading, Pa. Filed April 8, 1907. Serial No. 366,982.

1. A pneumatic tire having thickened edges, in combination with a rim grooved along its sides and provided with inflatable tubes adapted to firmly lock the edges of the tire within the grooves.

875,254. Automobile Frame Member. Matthew W. Gartshore, Reading, Pa., assignor to Parish Manufacturing Company, Reading, Pa., a Corporation of New Jersey. Filed April 5, 1906. Serial No. 309,971.

1. An automobile frame comprising pressed steel side members each having an inwardly extending bearing flange the edge portion of which is turned aproximately parallel with the vertical web at intervals and the unbent intermediate portions of which inwardly extending transom connecting brackets with integral ribs, and separate transom members entending between the vertical web portions of said side members and said bracket ribs and rigidly bolted to said brackets substantially as set forth.

875,297. Gasolene Engine. George W. Stanley, Logansport, Ind., assignor of one-eighth to George D. Miller, one-eighth to Ernest A. Tucker, one-eighth to Arthur E. Stanley, one-eighth to Frederick H. Klinsick, and one-eighth to William D. Craig, Logansport, Ind. Filed Aug. 20, 1906. Serial No. 331,352.

1. The combination with an engine having cylinders arranged in oppositely disposed sets, pistons in said cylinders, a power shaft, piston rods connected to said power shaft, a parallel shaft driven from the power shaft, valve chambers carried by the cylinders, valves in said chambers, eccentrics on the second mentioned shaft, blocks on the eccentrics, straps holding the blocks in place, and means for pivotally connecting two valves of oppositely disposed cylinders to the same block.

875,321. Transmission Mehcanism. Samuel C. Carter, Los Angeles, Cal., assignor of one-third to Carlisle H. Esler, Los Angeles, Cal. Filed Aug. 14, 1906. Serial No. 330,615.

1. The combination with a driving shaft of a plurality of gears shiftably mounted thereon, a housing for said gears, means for shifting said gears with respect to said driving shaft, wheels on said driven shaft, gears mounted on said driven shaft, and means for shifting said gears and said driven shaft for causing a variable rotation of said wheels.

875.351. Resilient Tire. Isaac W. Hodgson, Minneapolis, Minn., assignor of one-

fourth to Philip W. Herzog. St. Paul, Minn Filed Feb. 25, 1907. Serial No. 359,047.

1. In a resilient tire, the combination with a rim, of a tread made up of a multiplicity of yieldingly connected tread sections, and springs interposed between said rim and tread sections, and having interlocking engagement at their outer ends with the adjacent ends of said tread sections, substantially as described.

875,358. Combined Brake and Steering Knuckle. Joseph E. Landry, New Bedford, Mass. Filed Oct. 18, 1907. Serial No. 398, 101.

1. In combination, an axle beam, an axle, and a knuckle joining them, the axle member of the knuckle being a disc journaled to the beam on a vertical axis.

875,401. Variable Speed and Reversing Gear. James Worthington, Manitowoc, Wis. Filed May 6, 1907. Serial No. 372,169.

1. The combination of a driving shaft, a beveled gear wheel theron, a set of transmission shafts, a beveled gear wheel on each, arranged to mesh with the beveled gear wheel on the driving shaft, transmission gears on said transmission shafts, operatively connected with the corresponding beveled gear wheel, a driven shaft, and shiftable gear wheels thereon adapted to be moved into and out of mesh with the transmission gears.

875,472. Induction Coil and Box for Explosion Engines. Richard Varley, Englewood, N. J., assignor to Varley Duplex Magnet Co., a Corporation of New Jersey. Filed July 24, 1907. Serial No. 385,378.

1. An induction coil unit for explosion engines comprising a U-shaped sheet of paramagnetic material, an L-shaped frame assembled therewith to form a casing, and an induction coil within such casing.

875,508. Automobile Train. Angelo De Luigi and Carlo Ramazzotti, Milan, Italy. Filed March 22, 1906. Serial No. 307,763.

1. In a traction device, a train of vehicles, each having a pivoted axle, two telescopic members over said pivot having a cardan joint at their outer ends, bevel gearing connected with each joint, and chains for transmitting power to and from said gearing.

875,534. Magneto Igniting Device for Explosive Engines. Henri de la Valette, Paris, France. Filed Sept. 7, 1905. Serial No. 277,423.

1. A magneto-electric machine, comprising an armature, oscillating field magnets, an oscillating distributor of induced currents, and means for mounting the magnets and distributor, whereby they oscillate cooperatively one with the other about the axis of the armature.

"The A B C of Electricity." Price 50c. The Bicycling World Co., 154 Nassau St., New York City.

WANTS AND FOR SALE

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

FOR SALE—No. 14 sliding gear transmissions; 90 bodies, primed only; 75 bodies, painted only; 72 bodies, painted and trimmed; 69 sets bevel drive axles and hubs; 130 frames, unassembled; 30 frames, assembled; 35 radiators; 50 tanks; 59 two-cylinder opposed engines, 5½5; 105 sets springs; 48 mufflers; 98 sets universal joints; 47 steering wheels, 14-inch; also various quantity of other parts, all suitable for 2,000 pound touring car or runabout. RANDS MFG. CO., Detroit, Mich.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

THE METEOR 50. H.P.

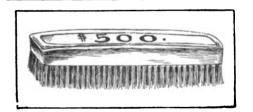
For Particulars, Address does things

METEOR MOTOR CAR CO., Bettendorf, la.

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



THE CHANDLER CO.

Name Plates and Stampings springfield, mass.

Silent
Powerful
Fast

ENNSYLVANI

Of the highest possible grade throughout.

PENNSYLVANIA AUTO MOTOR CO.,

Completely
Appointed

and

Luxurious

Bryn Mawr, Pa.

INSURE YOUR MOTOR

Against wear and carbon troubles by using



"INVADER"

TWO GRADES-LIGHT AND MEDIUM HEAVY YOU NAME THE CAR—W NAME THE GRADE

INVADER SEMI-FLUID COMPOUND

A thickened oil for transmissions

INVADER LUBRICATING COMPOUND For Compression Cups

CHAS. F. KELLOM & CO.

128 Arch Street, PHILADELPHIA

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akron, Ohie



MICHELIN TIRE CO ..

Militown, N. J.

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write us APPERSON BROS. AUTOMOBILE CO.,

Kokomo, Indiana. Members A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO.. Anderson, Ind.

EISEMANN HIGH-TENSION MAGNETOS

LAVALETTE & CO.

112 West 42d Street.

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y. Water St.



For catalogues, address
THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

TRUFFAULT-HARTFORD

SHOCK ABSORBER Mark

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department L.

HARTFORD SUSPENSION CO.,

V. Hartford, Pres. 66 Vestry St., New York



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, "07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J. NEW YORK—148 Chambers St. and Broadway and 73d St.

CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.
FOBES AUTO SUPPLY CO., Portland, Oregon.
FOBES AUTO SUPPLY CO., Seattle, Washington.
WAITE AUTO SUPPLY CO., Providence, R. I.

BOSTON—292 Devonshire Street.
BUFFALO—9 West Huron Street.
DENVER AUTO GOODS CO., Denver, Colo.
PENN AUTO SUPPLY CO., Philadelphia, Pa.

CIMIOTTI GARAGE

New Yerk City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try ms.

Tel. 2686 River.

Wico Adjustable Spark Plug



Each

Guaranteed

WITHERREE ICHITER CO.

541 West 434 St , New York

Show

a Mitchell. Phone "that" to any Mitchell Agent and he'll take you out if you're interface ested in the best value for money outlay you ever saw in the automobile line. Mitchell cars sell themselves. Prove it. Ask for catalog 18.

MITCHELL MOTOR CAR CO., Racine, Wis.

HAYNES

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY Members A. L. A. M. KUKOMU, IN KUKOMU, IND.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway-Chicago, 1702 Michigan Av.

Logan 1908 Model S Three Ton Truck

A truck equipped with a four cylinder water cooled 40 H. P. motor, built to give service month after month and year after year, and representing the best thought of the oldest and largest plant in America devoted to the manufacture of commercial motor cars. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE, OHIO.



For catalog, address Dept. 16. NORDYKE & MARMON CO. INDIANAPOLIS, IND.



\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumptio... A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Bex No. 250 AUBURN, IND.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.



STA-RITE PLUGS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE and see for yourself. Double or single Porcelain,—Mica or Magneto,—all kinds. All Good Dealers.

THE R. E. HARDY CO.,

85 Watts St., New York City

Ask ne about Ready-Flated Tires.

They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY 43 Warren Street, New York City.

"Keep your eye on Continentals"



THE

INDE IS RIGHT

Built to outweer an auto and it will Send for Booklet

Index Speed Indicator Co. MINNBAPOLIS, MINN.



SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies **SPRINGFIELD** METAL BODY CO., 366 Birnie Ave. Springfield, Mass.



A.O. SMITH CO.

High-Grade



Prossed Stoel Frames

Steering Columns

Transmissions Steel Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street,

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep-No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO ..

Jackson, Mich.

Eliminates Useless Experiments for "Talking Points" Studebaker Automobile Co., South Bend. Indiana

ALUMINUM BODIES J. M. QUINBY & CO. EST. 1834

Carriage Builders.

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

WEBER PORTABLE TRUCK TURNTABLES

For Automobiles
All other Turntable Trucks are Intringements
We Own the Basic Patent



The U. S. Courts have just declared our Patent good and valid in suit against the Pike's Peak Manufacturing Co. We have started suit against "Norwood" for infringing. The only sure way of buying an Auto Turn-Table or Truck is to see that they are branded "The Weber Portable Turn-Table Truck.

Headquarters and all orders to be sent to THE WEBER CYCLE & SUPPLY CO.

No. 6 East Kiewa St., Celerade Springs, Celo.



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.
New York.

-SIMPLEX-

50-60 H. P. \$5,750 Equipped Lic. Under Selden Pat. Guaranteed One Year

Palmer & Singer Mfg. Co. 1620-22-24 Broadway, New York 1321 Michigan Avenue, Chicago, Ill.

The Original Auto-Buggy,
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature. tive literature.

Success Auto Buggy Mfg. Co., Inc. 531 De Ballvere Ave., St. Louis, Ma

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Meter Car"

MCKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY

NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

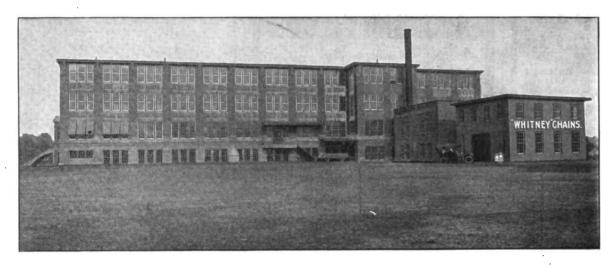
Enclosed find \$2.00 for which enter my subscription to

The Motor World

for one year, commencing with the issue of

Name.

Address



We are now well settled

New
Factory
and

READY TO SHOW RESULTS

Prompt Delivery and Constant Improvement in Quality

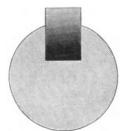
In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.



"WHITNEY" MACHINE KEYS and KEY SEAT CUTTERS
(For the Woodruft Patent System of Keying)



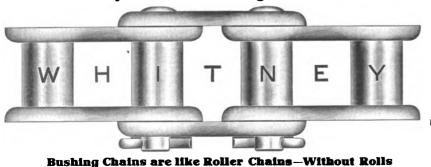




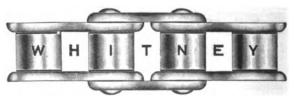


We carry 95 regular Sizes of keys and cutters in stock for immediate delivery

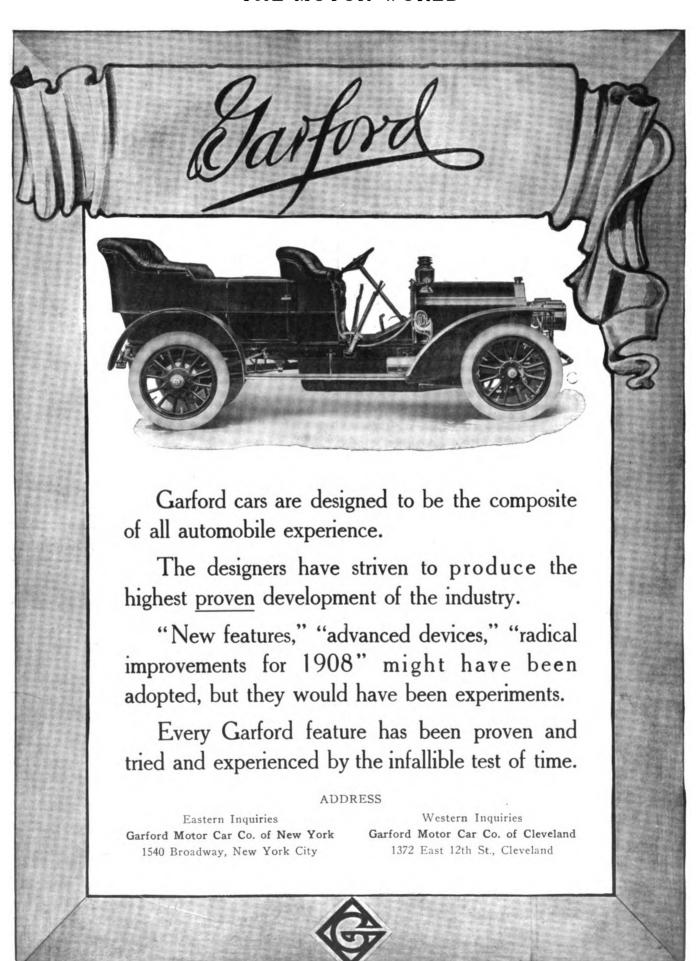
"Whitney" Detachable Bushing Chain-Patented



Roller Chain



The Whitney Mfg. Co. Hartford, Conn.



One Price for Warner Auto-Meters

TEVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at " that " price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also - and the jobber cut the price.

Then there was fun in the camp. That hurt us - it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that hurt the consumer, the dealer and

ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co. 133 Wheeler Ave., Belott, Wis.



National

Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K-4-cyl., 4%x5 **\$3500**

Model R-6 cyl., 4½x4¾ **\$4200**

Model N-4 cyl.. 5x5 **\$3700**

Model T-6 cyl., 5x5 **\$5000**



Write for Particulars

National Motor Vehicle Company

1007 East 22d Street INDIANAPOLIS. IND.



The Largest Automobile Supply House in America

The Miller Spark Plug

GUARANTEED FOR 90 DAYS



This plug has been on the market for the past four years and there are thousands of them in use. It is considered one of the best on the market, and is guaranteed for 90 days. Price of Standard size, \$1.50 each. We can furnish special size to fit any car on the market.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave.
Philadelphia, 318-320 N. Broad St.
Cleveland, Ohio, 1829 Euclind Ave.
Boston, Mass., 202-204 Columbus Ave.
Detroit, Mich., 227½-229 Jefferson Av.
Buffalo, N. Y., 824 Main St.

Ability, in an automobile, is a matter of mechanism, not of body design.

External beauty has not been slighted in the Marmon-a glance or two shows that.

But, to the man who really seeks a dependable car, we recommend something more important-a careful study of the mechanism of the Marmon.

In every detail of construction-motor, control, transmission, lubrication, suspension system, materials, workmanship-he will find a distinctive excellence, a score of notable patented features.

The Marmon's dependability—as reliable as that of a railroad train-commends it to the prudent man.

The Marmon's ease of motion-found in no other automobile-makes it a prime favorite with women.

Model H, Touring Car, 40-45 H. P., \$3500 Model H, Roadster, 40-45 H. P., 3500 Model G, Touring Car, 35-40 H. P., 3000



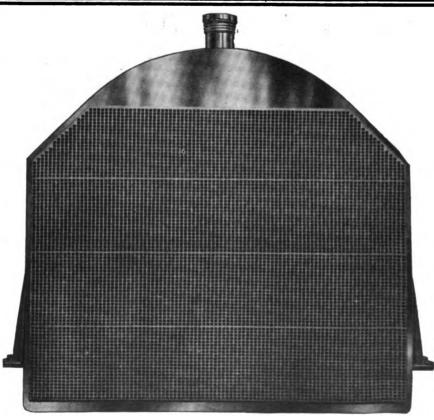
For catalog, address Dept. 16

Nordyke & Marmon Co., (Estab.) Indianapolis, Ind.

Boston, Mass., F. E. Wing Motor
Car Co., 12 Columbns Ave.
Philadelphia, Pa., Brazier Auto
Works, 38th and Market Sts.
Baltimore Md., Snodeal Automobile
Co., 2552 Madison Ave.
East Orange, N. J., Rickey Machine
Co., 92 Eaton Place.
Mitwaukee, Wis., John Ure, Jr., & Co., 172 12th St.
Indianapolis, Ind., H. T. Hearsey
Vehicle Co.

Desirable Territory tor Dealers.

Note List Above



1

It's not what we say, but what Mayo Radiators have done, that has led to their adoption by America's best cars.

I"What's worth doing at all is worth doing well," is the policy on which Mayo Radiators were built and will continue to be built.

■ Largely increased facilities enable us to take on a few new customers of the kind that place quality before price.

The Mayo Radiator is The Quality Radiator.

If you are a Quality Maker better write us at once.

> HONEYCOMB, CELLULAR OR FLAT TUBE TYPES.

MAYO RADIATOR COMPANY, New Haven, Conn.



A NEW SENSATION

Equip your car with

Supplementary Spiral Springs

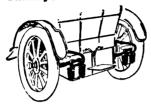
and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is yery interesting, and is yours for the asking.

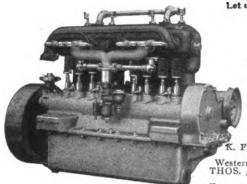
Supplementary Spiral Spring Co.

4555 Delmar Ave., St. Louis

New York Branch, 52 West 67th Street



CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908

THREE SIZES

THREE SIZES

4½ in. x 4½ in.
4½ in. x 5 in.
5 in. x 5 in.
4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.

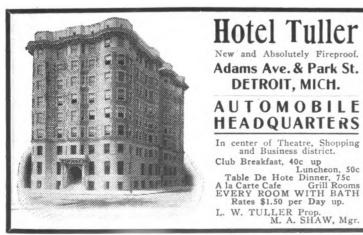
Our new factory and ma-chinery enable us to guar-antee quality and deliver-ies. Also clutches and transmissions. Send for

transmissions. Send for catalogue.

K. FRANKLIN PETERSON, 166 Lake St., Chicago, Ill. Western Representative THOS. J. WETZEL, 29 W. 42d St., New York. Eastern Representative.

CONTINENTAL MOTOR MPG. CO., Muskegon, Mich.





KINWOOD AUTOMOBILE PARTS.

ONE OUALITY—THE BEST.

OUR LEADERS:

Kinwood Perfection Radiators

Kinwood Mechanical Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc. Large facilities and dependable deliveries.

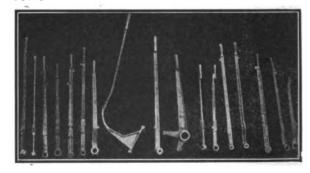
K. FRANKLIN PETERSEN. 166 Lake St., Chicage, Western Representative.

THOMAS J. WETZEL, I Warron St., New York, Eastern Representative.

THE KINSEY MFQ. CO., Dayton, Ohio.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



Sole Makers THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna. Philadelphia, Penna.

BODIES AUTOMOBILE



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.

For every dollar invested, including purchase price and maintenance, there are two to three times as many miles of actual service in a Single Cylinder Cadillac as in any other motor car.

This is not an empty claim. a fact borne out by the experiences of 16.000 users all over the world. Many of these have owned their Cadillacs for five years, have driven their cars 60,000 miles or more and are still using them.

No



so far as we know, has ever been discarded because worn out or unfit for further service.

If you want to know

The Truth About The Automobile and What It Costs To Maintain One

send for our 64-page Booklet containing the SWORN affidavits of a large number of users showing an average expense for repairs to car of less than 50 cents per week and averaging more than 18 miles per gallon of gasoline under all road conditions, mud, sand, snow, hills and mountains.

The booklet contains many interesting experiences and remarkable performances and proves conclusively the wonderful capabilities of the Single Cylinder Cadillac. It contains much information and advice which every prospective automobile buyer wants to know.

Be sure to ask for "Booklet No. 6."

Cadillac Motor Car Co., Detrolt. Mich.

Members of Association of Licensed Automobile Manufacturers.

INCOMPARABLE

THE SERVICE



White Scores the Usual 100 Per Cent.

The two White Steamers entered in the Bay State Automobile Club Endurance Run, February 22d, finished with perfect scores. Although the conditions of the run were not sufficiently severe to eliminate as large a proportion of the contestants as is usual, it should be noted that the White was the only make of those entering more than one car which brought through all of its cars with perfect scores.

In this respect the run resembles:

1—The Quaker City Motor Club Endurance Run, January 1-2, where the single White entry was the only car to make a perfect score, thus winning the contest from the 27 gasoline cars which competed against it.

2—The Chicago Motor Club Endurance Run, November 25-28, where the White was the only make which brought through all of its cars without road

3—The 1907 Glidden Tour wherein the White was the only make represented by three or more cars which was not penalized.

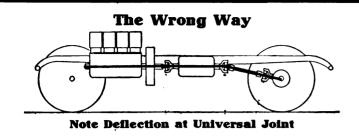
This regularity of the White performance, as compared with the extreme irregularity of the performance of cars of the other style of motive power, has established beyond question the superior reliability of the White.

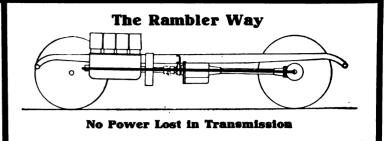
Write for Literature

THE WHITE COMPANY **CLEVELAND. OHIO**

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Philadelphia, 629-33 N. Broad St.

Boston, 320 Newbury St. Chicago, 240 Michigan Ave. Cleveland, 407 Rockwell Ave.





Remoder Straight Line Drive

Of the new ideas in automobile construction none are of greater value than the straight line drive system as applied to the 1908 Ramblers.

It is well known that no matter how good or carefully made the universal joint, there is an inevitable loss of power and great wear due to deviation from a straight line in the power transmitting system and the loss increases with the square of deflection.

With the Rambler straight line drive there is no deflection, hence no loss and the full power of the motor is delivered to the driving axle.

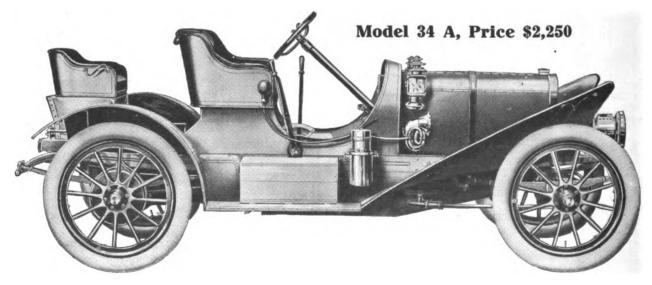
This is but one of many valuable features; our catalog tells of others of equal value; write for it today.

Thomas B. Jeffery & Company Main Office and Factory, Kenosha, Wisconsin

Branches and Distributing Agencies:

Chicago, Milwaukee, Boston, Philadelphia, San Francisco. Repro

Representatives in all leading cities.



This four cylinder chassis, equipped both as a 3-passenger roadster and 5-passenger touring car. Price of each style \$2,250. The Rambler Utility Car with double opposed motor, \$1,400.

Volume XVII.

New York, U. S. A., Thursday, March 5, 1908.

No. 23

MORTON TRUST CO. MAKES A MOVE

Places Itself in a Position to Foreclose Electric Vehicle Co. Mortgage—if Deemed Advisable, Says Counsel.

The Morton Trust Co., of New York, which, as trustees, holds the \$2,250,000 mortgage bonds of the Electric Vehicle Co., Hartford, Conn., now is in position to file action for foreclosure whenever it deems advisable.

On Thursday last, 27th ult., Judge Cross sitting in the United States Circuit Court at Elizabeth, N. J., directed the Electric Vehicle Co. to show cause on the following Monday why the trust company should not be permitted to file such a bill and on that day signed an order granting such permission.

When a Motor World man yesterday sought A. W. Putnam, general counsel for the Morton Trust Co., to learn the result of Monday's proceedings, and asked for particulars of "the proceedings looking to foreclosure on the Electric Vehicle Co.," Mr. Putnam at once replied that "no action of the sort had been taken."

When evidence was produced, and in response to further inquiries, he stated that the action in question did not necessarily imply foreclosure. He explained that when the receivership proceedings were instituted, the court, as is usual in such cases, issued an injunction restraining the filing of any and all suits against the company. The Morton Trust Co. merely had sought to have this injunction modified sufficiently to place them in position to bring foreclosure proceedings. Mr. Putnam made the point also that when the receivers were appointed the court did not declare the Electric Vehicle Co. insolvent, as one report had stated.

When pressed for the real meaning of the trust company's action, Mr. Putnam declined to be more specific.

"It simply means that the court has granted a preliminary order permitting us to

file a bill to foreclose the mortgage if we deem it advisable to do so," was all he would say.

Meanwhile, the receivers have put about 100 men to work in the Hartford factory to finish the cars which were in a state of partial completion at the time of the failure in December last. It is stated that buyers are in sight for practically all of the cars that will be made up.

"A. A. D. A." Gives up the Ghost.

The Association of Automobile Dealers of America-what there was of it-is off, that is, off the map. It was never very much more than a name and a few large newspaper paragraphs, and all these and anything else that may have assumed tangible shape, have been taken over and will be decently interred and forgotten by the National Automobile Dealers' Association, which was formed during the Chicago show in December last by a group of legitimate dealers. C. A. Wardle, of New York, who fathered the "A. A. D. A.," fixed its dues at \$25 per year, and selected himself as general manager, is no longer so keenly interested in the retailers' welfare. He has secured a good berth in the insurance busi-

Budlong's Successor not yet Selected.

No successor of M. J. Budlong as general manager of the Association of Licensed Automobile Manufacturers has been yet selected. The executive committee held a meeting in New York on Tuesday last, but no choice was made, nor is there any clue to the man for the place. Another session of the committee will be held next week, until which time Mr. Budlong will remain in office.

Perrett Leaves the Diamond Service.

W. M. Perrett, for several years manager of the Diamond Rubber Co.'s Detroit branch, has resigned that office. Temporarily, the vacancy will be filled by George J. Bradley, who is in charge of the Diamond depot in Cleveland.

TRYING TO MAKE TROUBLE FOR POPE

Unfriendly Toledoans Sue for His Removal as Receiver—Basis of the Suit and the Allegations Made.

Toledo interests which for several months apparently have been striving to make trouble for the receivers of the Pope Motor Car Co. returned to the attack again late last week. Their latest onslaught took the form of a petition filed in the United States Circuit Court in Toledo praying for the removal of Albert L. Pope and George A. Yule as receivers of the company.

The petitioners allege that these receivers have conducted matters without proper regard for the Toledo creditors; they assert that \$800,000 in claims against the Toledo plant are held by the Pope Mfg. Co., of Hartford, in which the present receivers are personally interested; further that these accounts do not appear on the books of the Pope Mfg. Co., which leads the petitioners to doubt their validity. The petitioners charge that Yule and Pope by past transactions indicate their desire to dismantle the Toledo plant, and seek to substantiate this charge by citing the sale of old and obsolete tools and machinery from the Toledo plant to the Pope Mfg. Co. last year and the return since last November of these implements to Toledo charged against the Toledo plant at the original invoice prices.

The case was heard by Judge Robert W. Taylor on Saturday last. Johnson Thurston, a Toledo attorney, appeared for the plaintiffs, and Clarence Brown, of Toledo, and Lewis H. Freedman, of New York, for the receivers. After a short hearing, in which no vital point was brought out. Judge Taylor suggested that it were better that both sides to the dispute settle the matter among themselves and adjourned the case without date. On Monday, the Toledo papers reported that an agreement had been reached to release Receiver Pope and

to retain Mr. Yule as sole receiver; but the report is mere moonshine.

It can be stated authoritatively that Messrs. Pope and Yule are in accord and working in entire harmony. There are no differences between them and at any future hearing that may be set by Judge Taylor, they will appear and present testimony to prove the falsity of the allegations made in the Toledo petition.

From the best information obtainable, it appears that in Toledo there are men possessed of personal grievances, and who long have been gunning for Albert L. Pope and seeking to disturb the peacefulness of his tenure as receiver. They are said to represent less than \$5,000 of merchandise creditors, but they have the ear of the Toledo press and periodically have been able to create "sensations" which have been wired to the four winds. The mouthpiece of these persons is a Toledo lawyer who formerly served the Pope interests, but who was not retained when the receivership was instituted. It is only a few weeks since that a tall story of the alleged refusal of the Pope receivers to grant an option on the Pope-Toledo plant to Joseph M. Schwab was floated, despite the fact that an option not only had been granted but renewed, although Schwab had advanced no money. The latest renewal of this option expired on February 24th, following which the present movement ostensibly to remove Receivers Pope and Yule, but in reality aimed only at Pope, was undertaken. Several of the creditors have expressed themselves as deploring the Toledo attitude. They say the continued effort to create disturbance has served more than anything else to injure the Pope-Toledo interests.

Meanwhile the receivers have accumulated a fund of several hundred thousands of dollars out of which it is believed a creditors' dividend of about 20 per cent. shortly will be paid. It is necessary to secure the sanction of the Federal courts in so many States that not even an approximate date of payment can be set.

Colt Had but \$30 Cash on Hand.

Schedules in bankruptcy filed last week by the Colt Runabout Co., New York, which started with a splurge and died young, show liabilities of \$14,213 and sixteen other claims, the amounts of which are unknown, and assets of \$1,875. The latter, which give a clue to shadowy foundations on which the concern was reared, consist of stock, \$1,075; tools, \$50; office furniture, \$70; accounts, \$650, and cash \$30. Among the creditors are Kane & Robinson, Chicago, \$4,000, secured; Minneapolis Steel & Machinery Co., \$2,700, secured; and South Side Garage, Kansas City, Mo., \$2,000.

The Pacific Coast Taximeter Cab Co. has been organized in San Francisco with capital stock of \$1,000.000. When it will begin operations is not known as to date the venture does not appear to have advanced beyond the "stock for sale" stage.

THE MOTOR WORLD

In the Retail World.

Roberts & Gardner have opened at 93 Jefferson avenue, Grand Rapids, Mich. They will handle the Jackson.

The Simplex Motor Co. is one of Boston's latest additions; it opened sales rooms at 173 Huntingdon avenue last week. W. H. Woods is its manager.

Hall Brothers will open a garage in Manitowa, Wis., and have begun the erection of a suitable building. The firm has taken the agency for several cars.

E. C. Bald, well known as a former racing crack, has located in Pittsburg. He will be sales manager for the Crescent Automobile Co., agent for the Ford.

H. Paulman & Co., Chicago agents for the Pierce Arrow, have opened a branch at 217 Fourth street south, Minneapolis, Minn. R. J. Randolph has been installed as manager.

The Wabash Automobile & Electric Co., 925 Wabash avenue, Terre Haute, Ind., is erecting a concrete garage at 662-4 Ohio street, that city. Its dimensions will be 140x50 feet.

Officers have been elected by the Mississippi Valley Automobile Co., St. Louis, as follows: President, Max Orthwein; vice-president, James A. Seddon; secretary-treasurer, Harry S. Turner. The officers constitute the board of directors.

Walter L. Githens, formerly treasurer, has been elected president of the Chicago Automobile Trade Association, Henry L. Paulman taking the office of treasurer. Frank Sparks was chosen secretary and Harry Tillotson, vice-president.

Charles P. Root, for three years editor of Motor Age, became a real tradesman last week when he established himself at 431 Wabash avenue, Chicago. He will handle the Dorris car, in addition to a line of motor boats.

Fire destroyed Frederick J. Lovatt's garage at 331 South Orange avenue, South Orange, N. J., Friday night last, 29th ult. All but two cars were saved. The total loss was about \$20,000, the insurance not being stated. The cause of the fire also is unknown

Lynn C. Lull, vice-president and general manager of the Auto Vehicle Co., of Los Angeles, died as he was being taken to a hospital in Detroit, February 21st. He had been ill for several months with heart disease, but had recovered sufficiently to start east on a business trip.

The Boyer Motor Car Co., located at Golden Gate avenue and Larkin street, San Francisco, has been attached by the sheriff. The company, which was agent for the Franklin and Royal Tourist, recently suffered by fire, which is said to have helped bring about the present predicament. The general belief, however, is that the company will be straightened out of its financial difficulties.

What is claimed to be the best equipped

garage in Ohio, was opened to the public on Sunday last in Cleveland. It is the new four story garage of the Citizen's Motor Car Co., and besides offices, waiting rooms, salesrooms and machine shop, has capacity for about 500 cars. The building cost \$300, 000. On the opening day several thousand people viewed the big garage, listened to music from a band especially engaged for the occasion, and carried home souvenirs in the shape of flowers.

The Week's Incorporations.

Warren, Ohio.—Valley Automobile Co., under Ohio laws, with \$20,000 capital. Corporators—H. C. Farnham, A. W. Sykes, John A. Fuller, E. G. Davis, and Evan Thomas.

Boston, Mass.—Taxicab Co., under Massachusetts laws, with \$300,000 capital. Corporators—Harold F. Parker, president; Joseph A. Little, treasurer, and Herbert H. Frey, Boston.

Newark, N. J.—Star Motor Car Co., under New Jersey laws, with \$25,000 capital; to deal in automobiles. Corporators—Lester-B. Harris, Leon B. Harris and Paul F. Gillette, all of Newark.

Binghampton, N. Y.—Sterling Alternating Ignition Co., under New York laws, with \$25,000 capital. Corporators—H. L. Loper, Richmond Hill; A. R. Kelly and F. Knowlton, New York City.

Hoboken, N. J.—Hudson Tire & Rubber Co., under New Jersey laws, with \$100,000 capital; to manufacture all kinds of rubber tires. Corporators—August H. Peterson, Richard Shippen and William Shippen.

Utica, N. Y.—L. L. Laman Auto Top Co., under New York laws, with \$5,000 capital; to make automobile tops and attachments of all kinds. Corporators—W. E. Kelly, Clinton; L. L. Laman and G. W. Griffiths. Utica.

New York City, N. Y.—Stuyvesant Auto Garage, under New York laws, with \$10,000 capital. Corporators—Loretta G. Buckley and Thomas J. Buckley, 1751 Clay avenue; Frank I. Carney, 942 Eighth avenue, New York City.

New York City, N. Y.—Vanderbilt Cup Garage, under New York laws, with \$5,000 capital. Corporators—Edward D. Cronin, 277 Vanderbilt avenue, Brooklyn; Fred Knowlton, 638 East 139th street, New York City; G. Whyard, Jersey City, N. J.

New York City, N. Y.—Central Tire Repair Co., under New York laws, with \$2,000 capital. Corporators—Frank Van Tassel. 220 West Forty-eighth street; John Graham, 148 West Eighty-third street, New York City; Frederick G. Hurst, Richfield Park, N. J.

New York City, N. Y.—Percy Ford Co. under New York laws, with \$1,000 capital: automobile parts. Corporators—Percival M. Ford, 226 Columbus avenue, Boston: Louis G. Duquet, 107 West Thirty-sixth street; Edna Hickey, 1402 Broadway, New York City.



YEAR REGINS WELL IN EXPORTS

January Figures Show Substantial Net Gain —Growth in Sales of Higher Priced Cars Abroad.

An auspicious opening for the year's exports of American automobiles and parts was afforded by the business recorded during the month of January, ult., which exhibited a net gain of \$29,185 over the corresponding returns of January, 1907. Oddly enough, however, a smaller number of cars was exported than last year, the respective quantities being 180 as against 214. Owing to the increased valuation of the more recent shipments, the valuation for cars alone showed an increase of nearly \$58,000; more than offsetting a decrease of some \$28,600 in value of exported parts.

A still more curious fact is revealed on examining the distribution of the exports. Only two countries, and one general group shared in the increased business. The United Kingdom, with an increase of \$128,-107, France, with \$12,635, and "Other countries" with about \$800, were responsible for the net gain in the total figures. Of the eleven geographical divisions netting less business for the month than last year, British East Indies, Italy and British North America lead.

During the seven months ending with January 31st, 1,367 complete cars were exported, as against 1,369 for the same period of 1907. But again the increased valuation of the product served to overcome a decrease in the valuation of parts, leaving a net gain in business of \$284,000, or thereabouts. Of the six divisions showing gains for this period, the United Kingdom leads with \$336,291, France with \$96,561, and the West Indies and Bermuda, South America, and Germany following with \$82,476, \$37,-967 and \$13,072, respectively, Mexico with \$191,167. British Australasia and British North America exhibited the most marked declined. The report in detail follows:

	—Janua	ıry	Seven Months Ending January			
	1907	1908	1906	1907	1908	
Automobiles and parts of			\$1,438,600			
Automobiles*	\$311,242	\$369,075		\$2,103,550	\$2,391,460	
Parts of	65,225	36,577		325,993	321,999	
Exported to—	•	,		020,>>0	021,	
United Kingdom	66.698	194.805	421.982	562,958	899,249	
France	26 ,380	39.015	113,696	177.663	274.224	
Germany		2.616	30.824	67.671	80.743	
Italy		15.231	62.094	68.825	43,452	
Other Europe	10.082	6.353	67.597	87.761	83.322	
British North America	37,638	19.064	250.116	496.094	469.541	
Mexico		47.597	145,179	465,073	273.906	
West Indes and Bermuda	35.975	31.956	104.893	100.043	182.519	
South America		21.551	40,490	131.381	169,348	
British East Indies	4,673	1.910	24.149	21.142	19,357	
British Australasia	53,157	14.668.	117.365	169.577	137.018	
Other Asia and Oceania	9.713	8.051	29.746	66.666	66 963	
Africa		697	20.180	7.402		
Other countries				: • : · =	6,600	
Other countries	1,320	2,138	10,289	7,287	7.217	
Total automobiles and parts.	\$376,467	\$405,652	\$1,438,600	\$2,429,543	\$2,713,459	

^{*} Number not stated prior to July 1, 1906.

Annual Report of a Rubber Company.

In the annual report of the Consolidated Rubber Tire Co., which last year added automobile pneumatic tires to its productions, a decrease is shown in gross sales for the year ended December 31 last of \$88,634, and in net earnings of \$28,505. Following is the income account, with comparisons:

	1907.	Decrease.
Gross sales\$ Other income	1,133,213 70,653	\$88,634 3,847
Total income\$ Operating expenses		\$92,481 63,976
Net earnings	\$57,010	\$28,505

These net earnings were sufficient to pay 2 per cent. on the \$2,850,500 4 per cent. 50-year sinking fund bonds, as compared with 3 per cent. in the year previous.

According to President Cartwell's report to the stockholders, the decrease occurred during the last three months of the year, after the financial disturbance set in.

Rigdon to Represent the Republic.

Samuel G. Rigdon, for many years the general representative of the Goodyear Tire & Rubber Co., Akron, Ohio, and who has several times covered practically the entire country in the Goodyear interests, has gone with the Republic Rubber Co., Youngstown, Ohio, which last year took up the manufacture of automobile tires. Rigdon will represent the company as general representative of the automobile tire department.

Puritan Takes Over Old Colony Assets.

To satisfy a mortgage, the assets of the Old Colony Light Co., Boston, have been sold, and the property purchased by the Puritan Gas Tank Co., of the same city. To settle the outstanding indebtedness of the old concern, the Puritan company voluntarily has offered the creditors shares of its 6 per cent. non-cumulative preferred stock on a basis of 100 cents on the dollar.

L. J. Sackett has engaged with the Matheson Motor Car Co., Wilkes-Barre, Pa. He will have the title of special representative.

MORSE'S COMPANY READY TO OUIT

Temporary Receivers Appointed for the Mercedes Import — Probability of Voluntary Dissolution.

The Mercedes Import Co., of New York, of which Charles W. Morse, the dethroned and indicted "ice king," and financial wizard was the financial backer, has gone into the hands of temporary receivers. Supreme Court Justice Platzek appointed John S. Primrose, Henry S. Colwell, and Eugene L. Bushe temporary receivers Friday last, 28th ult., fixing their bond at \$25,000.

The Mercedes Import Co. maintained pretentious offices and sales rooms at 590 Fifth avenue, Arthur Braun, former secretary to Mr. Morse, is president of the company; John S. Primrose, treasurer, and Robert E. Fulton, secretary. Mr. Morse is a creditor for \$25,000, and the National Bank of North America a creditor for \$55,479. Other creditors are Arthur Braun, \$12,500; R. E. Fulton, \$6,300, and C. L. Charley, \$43,800. The total liabilities are \$115,104, and the nominal assets \$146,978.

The assets consist of merchandise, \$62,-517; accounts, \$59,647; bills receivable, \$15,-215; furniture and fixtures, \$6,294; cash, \$3,129, and deposits, \$249.

The company was incorporated September 18, 1905, with a capital stock of \$100., 000. Allen & Halle, who inaugurated the taximeter cab service in this city, were at first interested in the company, and afterward Mr. Morse became the backer. Recently C. L. Charley of Paris became uneasy about the company's decreasing business, and sent his brother, Harry, here to investigate. The application for the appointment of receivers was made by officials of the company in proceedings for voluntary dissolution of the corporation, which recently lost the Mercedes agency for America.

Corbin Officials in New Positions.

At the annual meeting of the Corbin Motor Vehicle Co., Buel B. Bassette was promoted from the assistant treasurership and secretaryship to treasurer, and Guy Hutchinson, formerly the New York manager, was elected secretary. The following directors were chosen: Philip Corbin, Charles M. Jarvis, Charles H. Parsons, Charles Glover, Howard S. Hart, Maxwell S. Hart, Buel B. Bassette, Andrew J. Sloper, and Guy Hutchinson. The following were the officers chosen: President, Howard S. Hart; vice president, Maxwell S. Hart; treasurer, Buel B. Bassette; secretary, Guy Hutchinson.

Babcock Opens a Chicago Branch.

The Babcock Electric Carriage Co. has established a branch in Chicago at 1328-1339 Michigan avenu. It is in charge of C. M. Atterbury.

NO TWO COWS GROW ALIKE

Etutofoid realizes what leather is intended to be, but isn't. It's UNIFORM.

UNIFORMITY OF QUALITY ought to appeal to the man who is trying to do right.

So far as TESTS go—PRACTICAL TESTS— Autofoid has proven to be superior, weight for weight, to the best quality of leather.

It ought to be worth INVESTIGATING to a man interested in investigating this kind of material.

ASK THE TOP MANUFACTURER

AMERICAN LEATHERETTE MFG. CO.

BUFFALO, N. Y.

BRANCH PITTSBURG, PA. BRANCH DETROIT, MICH.



Published Every Thursday by

The Motor World Publishing Company

Joséph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

£# Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MARCH 5, 1908

Sound Waves in Motor Cars.

Among the manifestations of progress, most striking of which are the new problems which are constantly coming up, are the new methods of attacking old problems, which, being less spectacular, for the most part pass unnoticed by the public at large. Thus, the telephone having ceased to be a marvel in the eyes of the average user, modifications in its application and even the introduction of new principles in a subsidiary way, excite less comment to-day, than far less important innovations would have done twenty years ago. So, the motor car having risen to the distinction of a common utility, alterations in its design and the introduction of new methods of studying its phenomena must be of conspicuously evident moment in order to interest the average user.

It is hardly more than a year since the proposal of the Royal Automobile Club to determine the practical utility of motors of current design by means of exhaust gas analyses was hailed with more or less ridicule. Yet the sequel has proved that not only may a good check on carburation be obtained by examining the spent product of the engine, but even a measurable test of the accurary of its physical proportions as well. In the same way, credit is due to British thoroughness in discovering in the refractory cake on cylinder walls and combustion heads, several valuable clues as to carburetter performance as well as lubricating difficulties which, hitherto, had not been suspected to exist. The occultism or apparent irrelevancy of any method of analysis or synthesis does not of necessity preclude all possibility of its ultimate value to the investigator, provided only it has a logical attachment to the subject in hand.

So the notion of designing the automobile with the aid of a tuning fork and a compendium of harmonics instead of by the more obvious and simple method of applying the callipers and scale to someone else's car, is manifestly absurd. Even the idea of further perfecting design by the roundabout method of reducing vibration wholly within the co-ordinate parts appears a little far fetched. At the same time, since vibration is known to contain the germ of truth on which that mysterious and hardly tangible "fatigue of metals" is based, it is resonable to suppose that a certain amount of care expended in applying the laws of wave propagation and interference may be of value in extending the dynamic properties of the structure.

Certainly in so far as it may be applicable in reducing the hum of the parts it is an advance in science which is bound to advertise itself. It frequently happens that the study of vibration is applied with great success in the design of large buildings, bridges and other evolutions of modern engineering. And it is by no means unlikely that the theory advanced in the Fay-Ellsworth paper printed in another column, while adding gray hairs to the head of the automobile designer, may also prove instrumental in prolonging the useful life of his product.

The Wisdom of the Farmer.

One of the most encouraging symptoms to be discerned in the retail situation just now is the rapid and wholesome development of the farmer market, particularly in the broad area which the New Yorker usually dismisses indefinitely as the "middle

west." Until within a year or two this factor was viewed largely as a bright future prospect. Present indications point strongly to the fact that it has developed into a feature of real merit, comparable with that of the market of the cities and smaller towns. Efforts which have been put forth to awaken this branch of the market have not been in vain and a good line of business is in sight.

Primarily it has been supposed that the farmer and the farmer's motor buggy would be inseparable. The amount of business done by the motor buggy makers is sufficient to justify this impression absolutely, so far as it goes. But it further appears that a portion of the farmer market has invaded the realm of the second-hand car, and with proverbial shrewdity, if not with the gullability which is supposed to be inherent to the ruralist, has brought to the dealer a surprising amount of sound knowledge of motor matters.

Here is at once an inlet for the wise dealer and an outlet for the foolish. Because a purchaser is going to take his car 30 or 40 miles up state, it is natural to suppose it an easy thing to use him as a sort of unwitting grave digger to assist in the elimination of valueless wares. Even with his intelligence and wisdom it is possible to palm off a surprising amount of junk on the agriculturist, just as it is possible to trick the city dweller. But setting aside any possible scruples in the matter, it is a weakness in the plot, that it is possible to accomplish only one such interment in any given locality. Such practice must inevitably lead to a progressive narrowing of the field.

The modern farmer is not the Reuben of the conventional melodrama. Particularly as found in the middle west, he is a broad, wholesome figure, familiar with modern methods and equipment through reading and hearsay, if not by actual contact. He farms by wholesale and profits or loses in four or five figures, and he must be something of a business man in order to be anything of a farmer. Most of all, his eye is fixed upon the main chance, and however much he may want the motor go-cart, he wants the motor-utility vehicle even more, and is anticipating the time when he can reduce the cost of his crops by eliminating animal traction to the greatest degree possible. Therefore it pays to take care of the farmer. For in caring for his interests, the dealer is not building for his future trade alone. Because of the value of the personal

testimonial, caring for the farmer, also involves caring for the farmer's neighbors.

The Question of Equipment.

What promises to be a moot point in the industry at some not distant day is the question as to what equipment properly should be included in the selling price of the car. At the present time the spectacle is presented of one group of makers marketing their product with practically no equipment, of another including in the purchase price such accessories as tools, dash lamps, tail lamp and horn, and of a third, making a feature of the fact that the single cost figure is inclusive of everything necessary to the maintenance and operation of the vehicle, including acetylene lamps, top, and a truly liberal set of tools and replacements.

In a general way, this may be considered a point of no particular importance in its effect on marketing conditions, in as much as it might be taken as a foregone conclusion that a few dollar's worth of accessories would not hold as a valid consideration one way or the other with the unbiased and intelligent purchaser of a motor car. From a more intimate view point, there appears to be more involved in the matter that at first is evident, however. And if ever a definite trend should be discovered one way or the other, there can be no question that the car market might be affected to a certain extent and the accessory market very materially in consequence.

Accompanying the introduction of the latest crop of new models from the various factories, there have been several indications pointing to a possible increase in thu tendency to make the equipment more inclusive than ever before, as instanced in one case by the adoption of the catch phrase, "Nothing to buy but the license." In other quarters are found makers who are constantly becoming more and more rigid in their adherence to the principle that the purchase price of the vehicle should cover only its actual cost together with a fair margin of profit, while the manufacturer should not confuse his own interests with those of the dealer by going wholesale into the accessory business.

Theoretically, the complete equipment, when made to include all that is legitimately required for operating the car, involves a certain protection of the customer from possible misrepresentation and chicanery on the part of the agent and retailer, climinate the possibility of virtual

price-cutting on the part of the dealer who is disposed to "throw in" certain inducements in order to swing a sale now and then, and carries by inference the suggestion that the purchasers' money buys a great deal more than would be the case were the accessories left out and the price propor tionately reduced—it has above all, then, a certain amount of advertising value. This latter consideration is of material importance, however, only so long as this practice is the exception rather than the rule.

Were the practice of furnishing extensive equipments to become general, it would seem that its first material effect would be upon the accessory trade; a substantial portion of the market would be transferred from the selling to the building season, orders would be closed on large contracts with stipulated deliveries, and the turnover would depend directly on the manufacturing rather than on market conditions. At the same time the dealer's position would be altered somewhat, in that his accessory sales would be confined largely to replacements and to dealings with owners of old cars who desired to improve their equipment, or to those who incline toward sumptuous trappings for the machine regardless of cost or actual requirement in the absolute sense. The ultimate tendency would be to simplify the retail selling proposition to a certain extent, place the bulk of the accessory business on the same footing as the parts industry and finally, through competition, to settle market values for com plete cars. Its ultimate effect on the accessory manufacturers and on the jobbers and retailers is not, however, so easily fore-

Perils of the Rebuilt Car.

Always there is the peril of the persuasive mechanic, who for small remuneration is anxious to rebuild your car and give it "50 per cent." more power, or speed, or carrying capacity, or 50 per cent. more something than its maker meant it to have, and always there is the peril of the car which has passed through his hands. But never is either peril quite so imminent as during the early days of promised spring, when the owner of moderate means is tempted to "improve" his car through economy.

Whatever the type of car, and regardless of its original cost or make, this fact must be borne in mind; that its makers probably allowed no more strength in any single part than its maximum normal service seemed

COMING EVENTS

March 2-7, Ormond, Fla.—Annual beach carnival, under auspices Automobile Club of America.

March 2-8, San Francisco, Cal.—California Woman's Automobile Club's show in Coliseum.

March 7-14, Boston, Mass.—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

March 9-14, Buffalo, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

March 15-April 1, Omaha, Neb.—Omaha Automobile Dealers' Association's annual show in the Auditorium.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

March 18-24, New Haven, Conn.—New Haven Automobile Dealers' Association's show in Music Hall.

March 18-25, Rochester, N. Y.—Rochester Automobile Club's show in new Convention hall.

April 24, Westchester County, N. Y.—Briarcliff trophy race for stock cars.

to require. Increasing the power, increasing the weight, or increasing the carrying capacity-which are the same thing, incidentally involve an increase in all strains, both due to load and traction, to which the parts are subjected, and the increase involves not one or two, but practically every part of the fabric. It is not that improvements are impossible to the average car, nor that it will not stand modification in a variety of ways. The point is that such alterations invaribly should be made advisedly and under the supervision of a competent engineer. Otherwise the rebuilt car is a distinct and positive menace to safety and usually a wasted investment.

Suppose that several dozen men in half a dozen wagons drawn by half a dozen horses undertook a race from New York to Paris—or to Chicago, for that matter. Suppose the horses got stalled or went lame and that as a result a half dozen motor cars were fastened to the shafts and drew the wagons for mile after mile—what would the world say? Would it inspire faith in horses? In other words, is the New York-Paris circus performance proving a good advertisement for automobiles or automobiling? There are those who maintain that it would have been better had it never started.

BOSTON BARROWS FROM JAPAN

New England Show to Have a Japanese Setting—List of Exhibitors is Long and Impressive.

Not apple blossoms but wistaria; not a New England apple orchard but a bit of old Japan, will supply the setting for the Boston show, which begins its week's run in Mechanics Building, on Saturday evening next, 6th inst.; and which like all previous Boston shows, it promises to prove a show worthy of being classed with the national exhibitions. It was Boston that set the fashion in respect to uniform decorations and each succeeding year the setting has been both distinctive and beautiful.

The decorative scheme for the forthcoming occasion will be entirely Japanese. In the grand hall the back of the stage will have a drop curtain depicting a scene in Japan, while Japanese flags will be a feature of the bunting decorations. The spaces will be separated by private hedges with bay trees at the ends next the aisles, and in the centre of the grand hall will be a large fountain with trees and flowing water. In exhibition hall also the Japanese effect will be carried out with Japanese temple arches. All through the building great quantities of wistaria and other artificial blossoms will be used to add to the Oriental atmosphere. Attendants, too, will be dressed in Japanese costume, and, for home consumption only, it is stated that the Japanese government will have representatives present to "pick up points" for automobile manufacture.

The Bostonians take a lot of very pardonable pride in their automobile show. They attend in large numbers and even those of them who do not know a spark plug from a hole in the ground enjoy their visits. They seem to consider it a sort of midwinter picnic. They sit for hours listening to the music, the while contentedly eating peanuts or popcorn. The first night always is the "great night." It is then that passes are most plentiful; and the Boston populace makes the most of them. It comes early and stays late. It lines up long before the doors are opened and once opened, the building is packed to suffocation. To the stranger, the crowd on the opening night is itself worth going far to see, wholly apart from the exhibits and the decorations.

From the trade standpoint, the Boston show always proves of importance. Although the cars are staged by the local representatives, notable absentees are not numerous and it is seldom that several new cars, or cars that have not been displayed at any other show, do not make their appearance. On Sunday night Mechanics building will contain more of the latter sort than on any previous occasion. Of 211 exhibitors, 60 of them will exhibit a total of 89 different brands of cars, of which number

12 were not seen either at the New York or Chicago exhibitions. They are as follows: Palmer & Singer, American Mercedes, De Dion, Brouhot, Stanley, Clark, Viking, Shawmut, Springfield, Stilson, Crown buggy and Bailey Electric.

In the 142 accessory exhibitors who have booked space, are included nearly all the big tire makers and producers of other appurtenances, the host of new ones being unusually large. In the climate of New England the small accessory manufacturer seems to flourish. He will be present in force and all during the week his number usually is increased by ones and twos.

The full list of exhibitors is as follows:

Automobiles.

The White Co.—White.
J. W. Maguire Co.—Great Arrow.
Thos. B. Jeffery & Co.—Rambler.
Stanley Motor Carriage Co.—Stanley.
Curtis-Hawkins Co.—Grout, Chadwick,
Babcock Electric.

Geo. J. Dunham—Royal Tourist.
Winton Motor Carriage Co.—Winton.
Reed-Underhill Co.—Knox.
Corbin Motor Vehicle Co.—Corbin.
Park Square Auto Station—Berliet, Stoddard-Dayton.

Peerless Motor Car Co.—Peerless. Fred S. Smith—Autocar, Apperson, Walter.

Geo. H. Lowe—Imperial.
J. W. Bowman Co.—Stevens-Duryea.
Mills-Kennedy Co.—Welch, Springfield.
S. R. Bailey & Co.—Bailey Electric.
Morgan B. Kent—Hotchkiss, Stearns.
W. M. Jenkins & Co.—Mitchell.
Shawmut Motor Co.—Shawmut.
Dodge Motor Vehicle Co.—Pope-Toledo,

Pope-Hartford, Pope-Tribune, Pope-Waverly.

Allen-Kingston Motor Co.—Mercedes, Allen-Kingston.

F. R. Parker & Co.-Elmore.

W. A. Frederick Co.—American, Overland, Marion.

Franklin Automobile Co.—Franklin. F. E. Wing—Marmon.

Harry Fosdick Co.—Atlas, Springfield, Baker Electric.

Locomobile Co. of America—Locomobile. Columbia Motor Vehicle Co.—Columbia. Maxwell-Briscoe-Boston Co.—Maxwell. Ford Motor Co.—Ford.

Morrison-Price Co.—Rainier, Wayne,

A. T. Fuller—Packard, Cadillac.
Boston Motor Co.—Acme.
Matheson Co. of Boston—Matheson.
H. C. & C. D. Castle—Lozier.
Premier Boston Depot—Premier.
Linscott Motor Co.—National, Reo.
Edward S. Clark—Clark.

Whitten-Gilmore Co.—Thomas. F. E. Randall Co.—Pullman, Stilson, Pennsylvania.

Algonquin Motor Car Co.—Oldsmobile. Columbus Electric.

Lane Sales Co.—Lane. Oakland Motor Car Co.—Oakland. Northern Motor Car Co.—Northern.
Palmer & Singer Co.—P. & S., Simplex.
D. P. Nichols & Co.—Frayer-Miller.
K. A. Skinner—De Dion, Brouhot.
A. R. Bangs—Viking.
Ferd. F. French—Schack.
Waltham Mfg. Co.—Waltham-Orient.
Butler Motor Car Co.—Rapid, Cleveland,
Pierce-Racine.
Chas. A. Eaton—Lambert.
H. C. Stratton—Kissel Kar, Car de Luxe,
American Mercedes.
Dragon Motor Co.—Dragon.
The Fiat Co.—Fiat.
Renault Freres Selling Branch—Renault.

South End Car Co.—Brush.

Bostonia Motor Co.—Cartercar. Crown Motor Car Co.—Glide, Crown Buggy.

Studebaker Bros. Co.—Studebaker.

R. S. Crawford—Crawford.

Motorcycles.
Crouch Motor Co.—Crouch.
Hendee Mfg. Co.—Indian.
Light Mfg. & Foundry Co.—Light.
Ovington Motor Co.—F. N.
American Motor Co.—Marsh.
Reliance Motor Cycle Co.—Reliance.
Merkel Motor Co.—Merkel.
Reading Standard Company—R-S.
Aurora Automatic Machine Co.—Thor.

Accessories. Diamond Rubber Co., New England Lighting Co.; Wm. Cramp & Sons Co.; Moore-Smith Co.; Norton Grinding Co., Chandler & Farquhar Co., Coates Clipper Mfg. Co., Fuller & Sullivan, American Rotary Motor Co., Judson L. Thompson Co., West & Dodge, P. A. Murray & Co., Automobile Utilities Co., Columbia Vehicle Tire & Top Co., National Valgrinock Co., Arthur S. Gunn, F. S. Suthergreen, Globe Optical Co., C. J. Downing, Underhay Oil Co., Eagle Oil & Supply Co., Dover Stamping & Mfg. Co., Maryland Casualty Co., Century Optical Co., Non-Explosive Safety Naptha Container Co., Solderine Co., Boston Auto Light Co., F. H. Howard Co., Kilgore Mfg. Co., Chas. E. Miller, Randall-Faichney Co., Dow Tire Co., Wm. Herbert Jones.

Warner Instrument Co., Never-Miss Spark Plug Co., Acetylene Co., The White & Bagley Co., Massachusetts Auto Co., Pettingell-Andrews Co., S. F. Bowser & Co., Pittsfield Spark Coil Co., Goodyear Tire & Rubber Co., Jones Speedometer Co., Gray & Davis, Veeder Mfg. Co., Fisk Rubber Co., Eastern Carbon Wks., Morgan & Wright, Columbia Lubricants Co., F. Shirley Boyd, Gordon Auto Supply Co., Parker Mfg. Co., W. S. Daniels, Gabriel Horn Mfg. Co., E. T. Ward, John A. Salman & Co., Hartford Suspension Co., Empire Tire Co.

G & J Tire Co., The Angier Co., Witherbee Igniter Co., Gilbert Mfg. Co., Atwood Mfg. Co., Firestone Tire & Rubber Co., T. F. Russell, Motor Car Specialty Co., Boston Gear Works, Vacuum Oil Co., Wm. C. Robinson Sons Co., Sage's Trunk Depot, J. Frank Cutter, John T. Stanley, Hopewell

Bros., Gilbert & Barker Mfg. Co., Heinze Electric Co., Pennsylvania Rubber Co., N. Y. & N. J. Lubricants Co., Hartford Rubber Wks. Co., A. W. Harris Oil Co., Connecticut Tel. & Elec. Co., B. F. Goodrich Co., New England Motor Co., Leather Tire Goods Co., National Carbon Co., Ajax-Grieb Rubber Co., Westchester Appliance Co., Elite Mfg. Co., Monitor Distributor Co., Hillman Auto Supply & Mfg. Co., A. J. Wilkinson & Co., Pantasote Co., Prest-O-Lite Co., Electric Storage Battery Co., Hoffecker Co., Michelin Tire Co., Commonwealth Rubber Co., W. J. Connell. Auto Igniter Co., National Auto Accessory Co., Wm. J. Smith Co., Malden Leather Goods Co., Stackpole Battery Co., Joseph Dixon Crucible Co.

Whitney Mfg. Co., Post & Lester Co., T. Alton Bemus Co., Inc., Consolidated Optical Mfg. Co., Inc., Aetna Life Insurance Co., Albert Champion Co., Duncan Robinson, Old Corner Book Store, Voorhees Rubber Co., H. F. Campbell, Geo. A. Haws. Anderson Spark Plug Co., J. B. Draper & Co., Eco Mfg. Co., Chas. F. Kellom & Co., Wm. Nolan, Brown Folding Stool Co., R. H. Smith Mfg. Co., Boston Auto Gage Co., Proctor Supply Co., J. W. Colgan Co., F. P. Speare, Y. M. C. A. Automobile School, Nonpariel Brass Co., Ciglia Shock Preventer Co., Zeiglan Bullet Proof Cloth Co., Ball Bearing Tire Co., Baldwin & Co., Melrose Automobile Co., St. John Rubber Co., Auto List Publishing Co., The Defiance Chain Co., Shove & Gage Co., Inc., Walden Mfg. Co., Alfred Cutler Morse, Duplex Coil Co., Legnard Bros. Co., Vim Motor Co., Worcester Pressed Steel Co., F. R. Parker & Co., Lowney Co., L. E. Bova, John A. Mason, Visor Knitting Co., National Auto Top Co., E. B. Badger & Son, Hull & MacArthur, H. Snowden, Wood Carving Machine Co., Wood Piano Co., J. D. Coward, Hess-Bright Mfg. Co., H. H. Lynn, Park Square Auto Station, T. C. & W. L. Frye.

Engineers' Society to Meet in Boston.

The regular quarterly meeting of the Society of Automobile Engineers will be held in Boston, during the course of the show there. It will be opened on Tuesday evening, 10th inst., by the reading of a paper on electrical ignition, by J. O. Heinze, at the Massachusetts Institute of Technology. The following morning at 9.30 a visit of inspection will be paid to the laboratory and factory of the Heinze Electrical Co. In the evening a dinner will be held at the headquarters of the Bay State Automobile Association, and this will be followed by the regular meeting and the reading of papers.

Among the súbjects to be dealt with are "Perfecting Automobile Ignition," by J. O. Heinze; "Design of Automobile Crankshafts," by P. M. Heldt; "Heavy Goods Transportation Systems," by Joseph A. Anglada; "Automobile Forgings," by Richard W. Funk, and "A Year's Use of Denatured Alcohol," by Thomas L. White.

THE MOTOR WORLD

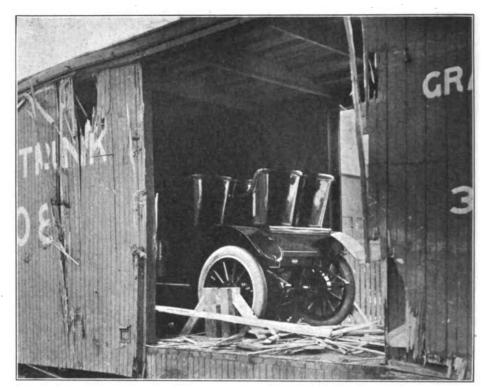
IMMUNE IN A RAILWAY WRECK

Runabout Uninjured Though Car Carrying
It was Shattered—Value of Careful
Loading Strikingly Illustrated.

When an automobile in a freight car goes through a railway wreck without getting hurt, while the car in which it was loaded was badly smashed, it speaks well for the automobile and the manner in which it was loaded. For the science of loading cars for shipment is a fine are which has been dejerked from its blocks notwithstanding the tremendous shock when the car hit the house. The runabout was removed from the freight car and forwarded to the purchaser in Baltimore.

Packard Designs a New Body.

Th Packard Motor Car Co. have brought out what they term a close-coupled body, which is a compromise on the touring car and the runabout. At first glance it differs not at all from the form of a five passenger body, save that it is slightly more compact and that it is fitted with a rumble seat. The



FRANKLIN CAR THAT DEFIED WRECK

veloped to its present state only after many costly exprimnts.

A Franklin 28 horsepower runabout which left the factory at Syracuse last Saturday in a box car, over the D., L. & W., bound for Baltimore, suffered an experience of the sort. At Messengerville, N. Y., not far from Binghampton, the axle of one of the freight cars broke and all of the following cars in the train were thrown off the track. The car in which the Franklin was shipped bumped up against a string of freight cars on one side and then caromed across the track and collided with a house on the other side. The force of the impact drove a large section of weather boarding right through the end of the car, tearing a great hole in its side.

A 4x4 oak door casing on the car was splintered, three oil boxings were smashed and a truss rod pulled all out of shape. In spite of all this rough handling, however, the Franklin motor car came through without a scratch, as shown in the accompanying photograph. The automobile was not even

design of the body aims to so bring and distribute the weight of the passengers between the front and rear springs, that a light load or a heavy one will not make much difference in the comfort obtainable.

Supplementary Spiral Spring Moves.

The Supplementary Spiral Spring Co., of St. Louis, manufacturers of the supplementary spring, have removed their New York office from 52 W. Sixty-seventh street, to the Motor Mart, 1876 Broadway. M. H. Cormack, formerly vice-president of the Standard Brake Co., is in charge of the office, his territory including the States of New York and New Jersey.

Mercedes Repudiates Sisterhood of Maja.

Although the Maja car was heralded in this country as "the sister of Mercedes," not all the members of the family seem convinced of the truth of the assertion. The new American representatives of the Mercedes has "no sisters, brothers, cousins, uncles or aunts."

THE LETTER TO LOUGHBOROUGH

Task of Carrying the Message to Fort Leavenworth Nearly Completed— "Gumbo" Worse than Snow.

After making a truly remarkable run half way across the American continent, the Studebaker car which is carrying a message to Loughborough—that is, to Colonel Robert H. R. Loughborough, in command at Fort Leavenworth, Kan., from General

there is nothing to watch but the road may contain many elements of excitement, but it is as nothing compared to a winter ride, with snow drifts, slush, mud and other dangerous things to buck against. There is no doubt but that the Studebaker's ride from New York City to near Fort Leavenworth, Kan., has been eventful and replete with "incidents."

As has been detailed in the Motor World the car left New York on Tuesday, the 18th ult., six days after the New York-Paris "tourists" left, and following in their trail were the next large cities visited, the latter place being reached on Tuesday, the 25th. The run from Michigan City to Chicago was accomplished that afternoon, the Studebaker having passed every car in the New York-Paris run. It might be added, however, that the Studebaker was driven night and day with alternate crews.

From New York to Chicago the car had been digging through snow drifts, and although much of the snow was left behind the Windy City it wasn't a circumstance to the sticky, clinging mud, hub deep, that it



PICTURESQUE BUT STRENUOUS INCIDENT OF CARRYING THE MESSAGE TO LOUGHBOROUGH

F. D. Grant, commander at Governor's Island, N. Y., was almost stalled while practically in sight of its destination. Snow drifts that were encountered east of Chicago could be dug through, but the Kansas mud—"gumbo", they call it—proved an anchor almost too great for the 30 horsepower car to pull against. Late last night it was reported nearing Atchison, and making pregress slowly through two and three feet of mud, while fifty automobiles are waiting to escort the army dispatch car into Fort Leavenworth if it reaches Atchison this morning (Thursday).

Record-breaking in the summer time when

proceeded up the Hudson river to Albany. Beyond Albany the roads were found to be in terrible condition and the tow path along the Erie canal was taken, as offering the least resistance. The first real thrill came when the car ran suddenly on a large patch of ice and shunted off the tow path in the canal. Fortunately the ice was strong enough to hold the car and a gang of Italian laborers helped push it back on the tow path.

Buffalo was reached on Thursday, 20th ult., and the car was driven up to Fort Porter to secure the signature of Captain Lafitte. Cleveland, Toledo and Michigan City

had to wallow through in Iowa, Nebraska and Kansas, after making a good run across Illinois in one day. Bad as the conditions were the car reached Omaha at 5 p. m. Sunday, 1st inst., and after a night's rest the tired crew started on the last lap down the westerly side of the Missouri river. It passed through Greenwood, Neb., at 11 a. m. Monday morning and then began the battle with Kansas mud. Detailed reports are lacking, but telegraphic reports show that the car is practically fighting its way through two feet of mud, literally foot by foot. It is expected to reach Fort Leavenworth some time this morning.

DATE FIXED FOR GLIDDEN TOUR

A. A. A. Touring Board Selects Buffalo for Starting Point—Victor Breyer to Represent Association Abroad.

This year's Glidden Tour will start from Buffalo, N. Y., on Wednesday, July 8th. Positive announcement of this fact was made by Frank B. Hower, chairman of the touring board, at the meeting of the board of directors of the American Automobile Association held in New York City, Tuesday morning, 3d inst.

The announcement was not unexpected as Chairman Hower several weeks ago had semi-officially stated that this date would probably be decided upon by the directors. The announcement of Tuesday followed an official adoption of the date. July 8th was selected as the most propitious time for starting such a tour and as the roads and legislative convention is to be held in Buffalo on Monday and Tuesday, July 6th and 7th, it was considered appropriate that the annual tour should start on the day following. All the affiliated clubs within touring distance of Buffalo will be asked to promote runs to finish in Buffalo on July 5th and to attend the good roads convention.

Neither the rules for nor the itinerary of the annual Glidden Tour have yet been announced, but Chairman Hower stated that he is at work upon both. The route selected will probably take in Cleveland, Pittsburg, Baltimore, Philadelphia, New York City and Boston, with a termination in the White Mountains.

Most of the work transacted at Tuesday's meeting was routine, but the interesting announcement was made that the Association has secured the services of Victor Breyer, of Paris, who managed the Grand Prix race last year, to act as the Association's European touring consul for the present year. Members desiring to tour abroad may rent cars, employ chauffeurs, or obtain any information they desire through Mr. Breyer without charge to them. Breyer is an Englishman by birth, but has lived in France all his life and as he is considered one of the best informed sporting men in Europe his services should be of real benefit. Breyer also acts as the European representative of the National Cycling Association of this country.

Applications for membership were received from the Automobile Club of Vermont, which comprises in its membership several clubs in that State, as a State association, and from the West Virginia State Automobile Association, as well as from several individuals, and the applications were favorably received. This makes five State associations admitted since the annual meeting in January, the others being the Delaware Automobile Association, the Automobile Club of Hawaii, and the Cali-

fornia State Automobile Association. Twenty-one State associations now are affiliated.

President W. H. Hotchkiss presided at the meeting, the other directors in attendance being George E. Farrington, treasurer; F. H. Elliott, secretary; J. D. Thompson, chairman of the racing board; Frank B. Hower, chairman of the touring board; Robert F. Hooper, chairman of the good roads board; Lewis R. Speare, of Boston; Edward Kneeland, of Pittsburg; S. L. Haynes, Springfield; Paul C. Wolff, Pittsburg; Isaac Starr, Jr., Philadelphia; George A. Post, Paterson, N. J.; John P. Coghlin, Worcester, Mass., and Giles H. Stilwell, Syracuse, N. Y.

Many Duties for Few Dollars.

The question as to the relative importance of the chauffeur in the staff of household servants may still be debatable on this side of the pond, but in England it seems to have been settled by one family, a clergyman and his wife, who have very clear ideas of the duties of the man who may be engaged to drive them about. That their prospective employe might thoroughly understand what would be required of him, the following rules and regulations were compiled by the good wife and submitted to each applicant as he appeared at their little home in the suburbs:

Motor driver's duties.—Be at the rectory from 6.30 a. m. till 7 at night; take entire charge of the car and clean and polish it; manage the pony; milk the cow; feed the chickens, pig, etc.; clean the boots and knives; mow the lawn and garden; no meals here; touch his hat to us; ride a bicycle, must work on Sundays, and wear decent clothes and a billycock hat.

The salary was \$5 per week.

Taber Wins Trophy a Second Time.

By winning the annual hill climb of the Corona Automobile Club at Corona, Cal., February 22d, A. L. Taber further established his claim on the challenge cup offered by the club to the driver winning the annual climb three times. As Taber made the fastest time at last year's meet he will have to win once more to secure the trophy permanently. The day was ideal for the event and although only five cars made the ascent all Corona was out to witness the affair. The distance was 3.1 miles, with a grade of from four to eight per cent. The cars finished in the following order: A. L. Taber, Wayne, 5:43; W. C. Barth, Tourist, 8:32; A. L. Taber, Oldsmobile, 8:52; Charles Allen, Buick, 9:05, and Tom McGuire, Oldmobile, 12:15.

Automobile Road Planned by Texans.

Texas automobilists are planning to construct an automobile road between Fort Worth and Dallas, with the aid of the highway commissioners. Should the road be built a midway clubhouse will be established at Arlington.

NEW YORK CARNIVAL PROGRAM

Big Parade Planned as the Chief Feature— One Section to Exemplify History of the Automobile.

The New York Automobile Trade Association finally has definitely decided on the chief features of the program for "carnival week," April 6th to 11th. The suggested day parade, open to all comers and in which it was thought one thousand cars might be in line, has been abandoned. Instead, the semi-historical parade, which first was proposed, will be carried out and will occur Tuesday night, April 7th. Some explorer having discovered that automobiles first were introduced into New York City ten years ago, that discovery will supply the peg on which the celebration will be hung. in other words, it will mark the tenth anniversary of the introduction of automobiles into New York City.

R. G. Howell will be grand marshal of the parade, which will comprise four divisions. The first division will be made up of cars made in 1903 and earlier. It is planned to make this division a moving exposition of the development of the automobile from its beginnings down to the time when it may be said to have become standardized. The carnival managers will make efforts to have all of the famous racing cars that have made history in races for the Vanderbilt and Bennett cups and that now are in this country in the historical section of the parade. The stock cars that have been entered for the Briarcliff trophy race in Westchester county on April 24 will also be eligible for places in the first division.

The second division will be reserved for the dealers and will be subdivided into three sections, for the steam, gasolene and electric types of cars, respectively. The third division will be open to all automobile owners and will be the decorated section. Owners who put their cars in this section will be requested to decorate them and two prizes will be offered for the two cars that are most beautifully decorated. There will also be a prize for the car having the most unusual decorations. The fourth division will be open to commercial vehicles.

On Thursday, April 9, there will be a hill climbing contest on some grade not yet selected. The stores along Automobile Row will keep open house during the week.

The Federal Bill Considered Too Drastic.

Considering the proposed national automobile law too drastic in some of its provisions. Congressman Gillett of Massachusetts will endeavor to amend the bill. One of the objectionable provisions would make a person violating the law ineligible for reregistration within five years. This is an entirely friendly proceeding on Mr. Gillett's part, inspired by the Springfield Club.

LESS THAN THREE MILLS PER MILE

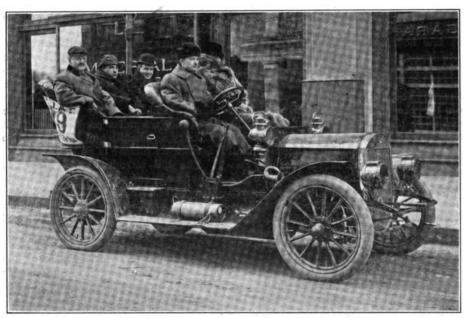
Per Capita Cost of Travel in Long Island Economy Run—Knepper Receives the Award of Honor.

That traveling in automobiles over frozen roads is more economical than in railway cars was proven beyond a doubt by the 242 miles economy run over Long Island roads Tuesday of last week, 25th ult., conducted by the Long Island Automobile Club, the tabulated results of which were made public on Friday last.

As told in last week's Motor World, 23 cars started in the run, all but four of

pint of oil, which, on a basis of 25 cents and \$1.00 per gallon, respectively, made the total cost \$3.56. There were five passengers in the car, the cost per passenger being 71½ cents. As the railroad fare for the same trip from Brooklyn to Amagansett and return is \$5.28, the comparison is obvious.

Honors were closely contested, R. A. Vail, Franklin, finishing second, with a per capita cost of 71½ cents. Vail used 9.875 gallons of gasolene and 2.5 quarts of oil, but as he carried one passenger less than Knepper, the cost per passenger was thereby increased. Third prize went to Robert Morton, who drove a Pullman. His total cost for five passengers was \$3.91, making an average of 78½ cents. There was only one cent's difference between the next two finishers, I.



H. K. KNEPPER, FRAYER-MILLER, WINNER IN ECONOMY RUN

which finished. After considerable mental effort the technical committee of the Brooklyn organization arrived at the results, which show that the winner was H. K. Knepper, who drove a Frayer-Miller car. On the run Knepper's car consumed exactly 13 gallons of gasolene and used 1 quart ½

C. Kirkham's Maxwell scoring 79% cents per passenger, while the per capita cost for C. G. Arnold's Pope-Hartford was 80% cents. The cost per mile for each person on Knepper's car was something less than three mills. The full scores are given in the subjoined table:

	Gasolene	Oil	Total	Passen-	Cost a
Driver and Car.	(gals.)	(qts.)	cost.	gers.	passenger.
H. K. Knepper, Frayer-Miller	13.000	1.25	\$ 3.56	5	\$0.71 1/5
R. A. Vail, Franklin	9.875	2.50	3.10	4	.771/2
Robert Morton, Pullman	13,125	2.50	3.91	-5	.781/5
I. C. Kirkham, Maxwell	14.937	1.00	3.98	.5	.793/5
C. G. Arnold, Pope-Hartford		2.12	4.03	5	.803/5
M. A. Martin, American Mors		4.62	6.44	7	.92
Philip Hines, Pope-Hartford	14.875	4.50	4.85	5	.97
C. A. Carlson, Winton*		0.87	6.82	7	.97 3-10
W. Walton, Acme		2.00	6.88	7	.98 2-7
W. A. Bowers, Thomas-Detroit		4.50	4.93	5	.98₃⁄₅
D. C. Teeter, Rambler	15.937	3.12	5.01	5	1.00⅓
J. W. Mears, Acme*		3.50	7.10	7	1.01 3-7
H. Minchenor, Lozier	27.775	4.50	8.07	7	1.15 2-7
C. Hosley, Maxwell	22.50	1.50	6.00	5	1.20
James D. Rourk, Cadillac	18.25	5.75	6.00	4	1.50
W. Birdsall, Mora		4.12	5.03	3	$1.67\frac{2}{3}$
John Holm, Studebaker		6. 37	8.5 3	5	1.703/5
Kingsley Swan, Stevens-Duryea*	29.50	5.62	8.78	5	1.753/5
W. A. Flinn, Acme*	30.375	3.75	8.53	4	2.131/4

^{*} Six cylinders.

TAME SPORT ON ORMOND BEACH

"Crippled" Entrants Reduce the Already
Thin Fields—Large Crowd Sees Series
of Uninteresting Runaways.

It looks very much as if the Ormond beach speed carnival had "shot its bolt." Indications to that effect which were apparent last year, are multiplied on the present occasion. Not even the proud name of the Automobile Club of America, which this year is standing as the sponsor of the carnival, has served to help. Outside of Florida, interest scarcely has been lukewarm. Spectators and entries both have been hard to attract. The carnival was to have been inaugurated on Monday last, but as several of the few entrants had not arrived, the opening events were postponed until Tuesday, and then, although the weather was all that could be desired and the crowd considerably larger than has yet attended an opening day, the sport was flukey and disappointing.

The beach was far from its usual good condition and the fact that both races-the 100 miles for the Minneapolis trophy and the 160 miles for stock cars, which was reduced to 150 miles, proved uninteresting runaways, to say nothing of there being several scratches in each event and only two cars in each running at the finish, did not serve to put the crowd in very good humor. In the 100 miles race the time was more than a half-hour slower than the record, and although a record was claimed in the 150 miles event for stock cars, for the reason that it was the first race ever held on the Florida beach at a longer distance than 100 miles, the time made in it was not startling, and is far from representative of the speed that can and has been obtained on the tide washed strip of beach.

As a large grandstand had been erected in front of the club house at Daytona, which was comfortably filled with persons who had paid fancy prices to witness uninteresting runaways, both races were started from that point. Neither of the expected loops at each end of the course had been built, and as the course laid out for Tuesday's races was only 12½ miles in length, numerous turns were necessitated.

The start of the 100 miles race for the Minneapolis trophy was not encouraging. Of the six original entries three had to be withdrawn. The Renault was out because of a broken oil pipe and the Haynes had been withdrawn with a broken crankshaft, it was stated, while the B. L. M. was said to have tire trouble. Therefore only three cars started, the 60 horsepower Fiat, with Cedrino at the wheel; the front drive Christie, driven by H. W. Blakeley, and a 120 horsepower Hotchkiss, in charge of H. B. Shefts.

Although Shefts was the first off the mark

Cedrino overhauled him before 100 yards and was soon out of sight, while Shefts laid up inside of the first mile with tire trouble. The Christie car made the first turn all right, but stopped shortly after with a broken valve. When Cedrino came up to the grandstand after the first turn one of the front tires was missing and he stopped some time to replace a stop on a pet cock. It was not until after he had returned that he replaced the tire. No sooner had he got under way again than the tire ripped off, and this time he was delayed 20 minutes. His time for 20 miles was 15:37, and for 25 miles, 26:39, while Shefts covered the same distance in 47:28. At the 50 mile mark Cedrino had gained a big lead, his time being 1:04:05, while Sheft's was 1:17:51. It was simply a runaway for Cedrino, and although he drove most of the distance on three tires and about half of the way on two tires, he was never in danger of being overtaken by Shefts. Cedrino finished the 100 miles in 1:50:20, which is 34 minutes 40 seconds slower than the record for the distance, made by Walter Clifford-Earp in 1906. When Cedrino finished Shefts was at the 75 miles post, but no time was taken.

Four starters lined up for the 160 miles race for stock cars-which was reduced to 150 miles—as follows: E. W. Howard, 45 horsepower Allen-Kingston; J. Hunsley, 45 horsepower Cleveland; Louis Bergdoll, 60 horsepower Benz; and J. Carey, 60 horsepower Thomas. Bergdoll got away first at the start and led by a good margin at the 25 miles stake in 25:15, with the Thomas second and the Cleveland third. The Allen-Kingston melted a bearing early in the race and was withdrawn. Bergdoll reached the 50 miles post in 1 hour 1 minute 2 seconds. Carey had withdrawn and the Cleveland passed the half century mark at 1:17:27. One hundred miles was reached by Bergdoll in 1:47:31. Bergdoll continued in the lead until the finish, the time for 150 miles being 2:40:53. Hunsley was on the last stretch when Bergdoll finished. The summaries:

One hundred miles for Minneapolis trophy—Won by Emmanuel Cedrino, 60 Fiat; second, H. B. Shefts, 120 Hotchkiss. Time, 1:50:20.

One hundred fifty miles for stock cars—Won by Louis Bergdoll, 60 Benz; second, J. Hunsley, 45 Cleveland. Time, 2:40:53.

If Tuesday's racing was a disappointment that on Wednesday was even tamer. The only event decided was the 125 miles event for the so-called "gentlemen amateurs," which resulted in a runaway after half the distance had been covered, for Louis Bergdoll, a Philadelphia dealer. As the existing A. A. rule classifies every one engaged in the automobile trade as professionals, how Bergdoll qualified as an amateur is past understanding. Three cars started and two finished the race. Before the race there was considerable comment

regarding the weight of the Benz, which tipped the scales at about 300 pounds over the international limit. By agreement the objection was waived and the car was permitted to start.

Two fires were the only occurrences to relives the day's monotony. Joe M. Gilbert, of Continental tire reputation, had decided to become a racing man for the occasion, and had entered his Packard car for the amateur event. Gilbert was tuning up his car before the race, when a short circuit started a small blaze. A bystander picked up what he supposed was a can of water and doused the burning car with it. Unfortunately it proved to be gasolene instead of water. Needless to add, Gilbert did not become a race driver. Quick work with fire extinguishers and sand prevented the total demolition of the car, but it was rendered unfit for racing.

A few hours later Harry Levey's big Hotchkiss gave an exhibition of fireworks on the beach opposite the judges' stand, and the officials had a chance to play volunteer firemen. The car was put out of commission for the time being. Crippled cars seem to be playing a prominent part in the meet. The Haynes was put out of the running before the meet commenced and all efforts to get the B. L. M. car that was constructed for the Vanderbilt race, but which did not start, into commission have proved futile. Latest reports state that the transmission is askew. Paul LaCroix's Renault has a broken oil pipe, which it is expected may be replaced in time for the car to participate in to-day's race.

The beach was in better condition than on Tuesday, and faster time resulted. The race for "gentlemen amateurs" originally had been scheduled for 128 miles, but as the course had been reduced to 12½ miles instead of 16 miles, as was first intended, the event was made 125 miles to conform with the change.

There were only three starters-Bergdoll in the Benz, S. B. Stevens in the Fiat, and R. G. Kelsey in the Christic. Bergdoll got off the mark first, but was soon passed by Stevens, the latter reaching the club house after the first turn, more than a mile ahead of the other two. His time for 25 miles was 20:40. Bergdoll covered the distance in 22:54, and Kelsey in 37:07. Stevens also led at the 50 mile post in 41:37, with Bergdoll second in 46:41. In the next 25 miles misfortune overtook Stevens, in the shape of a broken rocker arm on the engine of the Fiat. A touring car was dispatched for another part, but half an hour was lost before Stevens got going again. The Christie car had in the meantime developed engine trouble and retired. Bergdoll kept plugging along and finished 75 miles in 1:07:49, 100 miles in 1:30:35, and completed the distance in 1:53:301/5. Stevens had covered 95 miles in 1:54:28 when Bergdoll crossed the finishing line. The summary:

One hundred and twenty-five miles for gentleman amateurs—Won by Louis Berg-

doll, 60 horsepower Benz. Time, 1:53:30½. Also ran—S. B. Stevens, 60 horsepower Fiat, and R. G. Kelsey, 50 horsepower Christie.

Object Lessons for Farmer Solons.

The committee on agriculture of the House of Representatives of the State legislature of Kentucky was "joy riding" last week. Unlike most "joy riders" the agricultural committeemen are not grafting rides by false pretences. Quite the opposite is the case, for they are being importuned to take rides around the State in cars furnished by members of the Automobile Club of Louisville.

In the language of one of the automobile club's legislative committee, the State legislators are being "shown not the way an auto ought to auto, but how an auto does auto."

In other words, in an endeavor to kill a bill introduced recently by Representative "Windy Bill" Thompson, which is now in the hands of the committee on agriculture, is responsible for the demonstration to these members. They will be shown that a rate of ten miles per hour on a flat lever country is absurd and that a \$50 to \$500 fine for an offense is an outrage.

The bill introduced by Representative Thompson amends Section 1 of the present law to read, a maximum speed of ten instead of fifteen miles per hour, and increases the fine for infraction from \$10 to \$100 to from \$50 to \$500.

Naturally, the automobilists object to this clause, and it is by actual speedometer tests that they hope to impress upon legislators the real meaning of the proposed "ten-mile limit."

Postmaster Morgan Favors Motor Mail Ca.

Prospects of the ultimate adoption of motor vehicles in the United States Postal Service to a uniform degree, are constantly growing brighter. At the annual meeting of the New York State Association of Postmasters, held in New York City this week, Postmaster Morgan of the New York postoffice, gave his personal endorsement of the motor car, and suggested its use as a solution of one of the present dilemmas of the department, which arises from the difficulty of securing prompt deliveries of periodical mail in the residence sections of the city.

"There is one class of mail matter," he said, "that should not be neglected, and that cannot be neglected without serious complaint. That is the class which includes the newspapers and periodicals. As we deliver that mail now we have to depend upon wagons. It is my opinion that automobiles should be used. Whether the automobile can be relied on for this service will be up to the department at Washington, but I believe that the automobile has reached a point of service that warrants its test as a factor in the postal service of the United States."

ROBERTS ARRIVES AT OMAHA

American Leader in New York-Paris "Race" Encounters a Protest—Rumor of Possible Change in Route.

Just what the so-called New York-Paris automobile "race" will develop into is shrouded in beautiful uncertainty. Many conflicting reports as to suggested changes in the route have been flying rampant during the past week, but it is evident that the cars mean to travel overland as far as San-Francisco, at any rate. This conclusion is strengthened by the fact that when the leading Thomas car arrived in Omaha shortly before noon yesterday (Wednesday), preparations were made to resume the run to Cheyenne, this morning. Montague Roberts, the driver of the Thomas car, announced that he would pilot the car only as far as Cheyenne, Wyo., when it would be turned over to George Schuster, who has been with him throughout the trip, and to Captain Charles Hansen, the Arctic explorer, who forsook the French De Dion car after a disagreement with St. Chaffray, the driver.

Roberts got a great reception when he reached Omaha. It was, according to reports, the biggest demonstration that has been made since the cars left New York City on February 12th. The council allowed the fire whistles to be blown in honor of the American contestants, while the whole town took a holiday to view the mudcovered American car. The Italian Zust car had reached Vail, Iowa, last night, at 6.45, after a run of 89 miles through the mud. The French De Dion is still at Cedar Rapids with a breakdown, while the Prothos and Motobloc have gotten as far as Chicago.

If the Indiana snow drifts through which the cars had to be dug and pulled through was disheartening, it was at least clean, which same cannot be said of the gumbo mud that they had to wallow through after leaving Chicago, especially in Iowa. As told in last week's Motor World the leading Thomas car reached Chicago on Tuesday afternoon, followed on Wednesday by the French De Dion and the Italian Zust cars. After being wined and dined, and then all over again. Roberts left Chicago on Friday morning. 28th ult. The French and Italian crews did not have their fill of hospitality as dispensed by the Chicago motorists so they remained until Saturday morning in the Windy City.

Before leaving Chicago, however, the foreigners sprung a surprise in the shape of a protest against the Thomas car and Roberts. Among the things they claimed was that the Thomas had been materially changed while at Buffalo; that the car was towed many times, in one instance, between South Bend and Michigan City—the motor remaining stopped for two days, and the cooler removed while horses pulled the car: that the car was towed by a trolley car at one point; that the car used the railroad tracks and that it was put on sledges at certain points. The protest was signed by St. Chaffrey of the De Dion, Sirtori of the Zust, and five others. E. R. Thomas denied the first allegation, stating that the only thing changed on the Thomas car at Buffalo was the substitution of a larger gasolene tank, taking off the fenders and one of the bucket seats at the rear. Roberts issued a general denial of the other charges and said that the belated protest of the French and Italian drivers was a case of "sour grapes." He said that at no time did the motor stop running, that the car was not towed by a trolley; that it did use the railroad tracks at one time and was pulled through many drifts, but so were the other cars.

Roberts entered Iowa on Saturday and stopped at Clarence, while St. Chaffray and Sirtori got as far as Rochelle, Ill., Roberts's stopping place the night before. Dissension arose in the De Dion car before it left Chicago. St. Chaffray and Capt. Charles Hansen, the Arctic explorer, had some words and the latter left, declaring that he would take a car through to Paris anyway. Hansen's place was taken by Emanual Lescares, a Chicago Frenchman. Roberts did not lay off over Sunday but continued to Belle Plains, Iowa, 1297 miles from New York. The De Dion and the Zust kept together to Calmus. All the cars had to plough through deep mud, and naturally the going was slow. Sunday night the German Protos was reported at Chesterton, Ind., and the Motobloc at Michigan City. After eleven hours of running through deep mud Roberts succeeded in getting the Thomas car to Ogden, Iowa, on Monday night of this week, 2d inst. The Zust and De Dion cars were reported at Cedar Rapids, 132 miles behind, while a broken steerink knuckle caused the Protos to stop at Chestertown, Ind., thus enabling the Motobloc to overhaul it at that place.

Another shift in positions was made on Tuesday, when the De Dion broke a spring and injured its steering gear so that it was obliged to wait at Cedar Rapids for repairs. The Zust pushed on through the trail of mud that the Thomas had left behind and got as far as Ames, 1,369 miles, that night. Roberts reported that the mud he encountered after leaving Ogden was the worst yet, but notwithstanding he managed to get as far as Logan, 1,502 miles from New York, and only 34 miles from Omaha. It also was announced on the same day that Captain Hansen had concluded arrangements with the Thomas company and would become a member of the Thomas crew at Omaha. The accident to the Protos car required it to remain idle all day at Chesterton, Ind., while the Motobloc, which up to that time had assiduously held up the rear end of the procession, passed the Protos, and chugged triumphantly into Chicago, 1,043 miles, having been twenty-one days on

the road from New York. It is indeed a great automobile "race!"

There seems to be some doubt as to the future route of the contestants. It has been reported from several sources that unless the cars reached San Francisco by March 8th they would not be able to take the boat for Valdez, Alaska. Inquiry of the New York Times, failed to disclose anything definite, except that a meeting to determine the future course, probably will be held within a day or so. Another report has it that the cars will proceed overland to San Francisco, thence taking the train for Scattle, overtaking the boat there.

Non-Stop Run of 440 Hours.

After running uninterruptedly for 440 hours and 50 minutes the 28 horsepower Franklin motor car with which the Sid Black Auto Co. of Cincinnati, had been making a non-stop run, was stopped last Saturday afternoon, 29th ult.

The engine was running smoothly at the time and there was every reason to expect that the motor would continue indefinitely. One of the employes of the Black company, however, in trying to reverse the machine in the street, pulled on the emergency brake lever, set the brakes, and then threw the clutch in, stalling the engine. A minute thereafter, the engine was restarted and the car driven into the garage, the test coming to an end.

The engine was first started Tuesday. February 11, the non-stop run including actual road work each day, and idle running in the garage at night. The daily road runs averaged between 250 and 300 miles. On three successive days the car was driven to Columbus and return via Dayton and Springfield, a distance of over 250 miles. On other days it went to Indianapolis and back, to Lexington and return and to various other cities in Ohio, Indiana and Kentucky within a radius of 100 miles of Cincinnati.

Careful records were kept of the road mileage of the car, which amounted to 3,300 miles, and of the amount of gasolene consumed, which averaged about 25 gallons per day. The oil consumption was about 2½ gallons per day. All repairs such as the replacing of one or two valve springs, putting on tires and even replacing a bearing, were made without stopping the engine. During the entire run no trouble with the engine was experienced.

Time to Overhaul the Car.

It should be borne in mind that a car which has been subjected to any great amount of use in deep snow usually requires a thorough overhauling before it is perfectly fit for summer service. The inspection incident to this overhauling should invariably include the spring mountings, steering gear, and all bolts on frame and running gear, which may have been shaken loose by the unusual strain of the winter use.



ELMORE RUSHING OUT TAXICABS

All the Present Output Booked for Chicago for Service There—Specifications of the Vehicle.

Elmore taxicabs are now being shipped from the Elmore factory as rapidly as they can be assembled. For the present the entire output is being sent to Chicago, where Mr. Owen H. Fay intends to install a taxicab service.

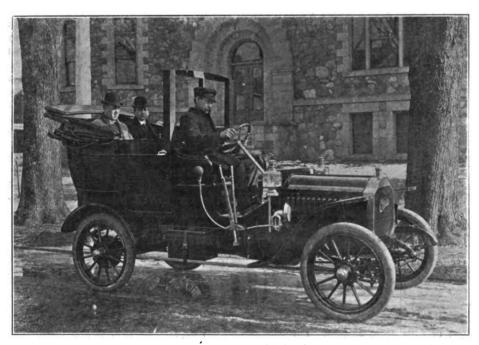
These taxicabs are of the same construction as the Elmore Thirty, which is the three cylinder, two cycle valveless car built by the Elmore Mfg. Co. The cab is an ex-

both the front and the door windows are of the drop pattern manipulated from the inside. The regular color of the Elmore taxicab is dark green with a light red stripe.

The only other difference between this taxicab and the regular stock chassis is that the wheel base has been shortened so that in the taxicab it is 102 inches. This makes the car very easy to handle and it can be turned around in the average street without having to back. In the Elmore cab, which is here illustrated, the two men responsible for it, J. H. and B. A. Becker, are seated.

Official Inspection for Taximeters.

A natural consequence of the general introduction of taximeters into the motor-



THE ELMORE TWO-CYCLE THREE-CYLINDER TAXICAB

ceedingly light one, weighing less than 2,300 pounds. The engine develops 24 horse-power and is geared 3½ to 1, so that a speed of from 4 to 30 miles an hour is easily obtained.

The inside height of the body is 60 inches and the inside width is 40 inches. From the front seat to the back cushion is 45 inches. The door is 22 inches wide and 54 inches high. The distance between the back of the front seat and the front of the rear seat is 27 inches and the extreme height of the body from the ground is 90 inches. Three people can be very conveniently handled in the cab, while two people have plenty of room and to spare.

The upholstering is furnished either in plain or in biscuit pattern, in either cloth or leather. Best quality of both covering material and curled hair is used. The cushions are all extra length and are built on the best quality of oil tempered springs, and like the rest of the inside are furnished in blue. Arm straps are also supplied. The doors are operated by inside latches, and

cab traffic of London, is the questioning of their accuracy. Failing of success in pinning the charge of dishonesty onto the coats of the drivers, the insistent public has proclaimed the dishonesty of the instruments themselves until now it has been decided that all licensed cabs must carry taximeters which have been officially inspected and sealed. The ruling which carries this clause has recently gone into effect, and a time-limit of three months has been allowed to permit the inspection of all instruments in present use. After the middle of May every taximeter in London, must bear the seal of the Physical Laboratory at Kew.

It is possible to straighten up a sagging live axle by taking up the truss rods, if such are provided, or if not, to install one or more pairs on the under side. Care should be taken in doing this, however, not to throw too great a strain on the trusses, as it is possible to bring nearly the entire load upon them, and give them more work than they are capable of fulfilling properly.

CONTRACTS INVALIDATED BY TIPS

Far Reaching Court Decision Involving the Question of Commissions Paid to Employes Making Purchases.

While the question of paying commissions to chauffeurs has been commented on from time to time, it has always been treated from the ethical standpoint and little or no attention paid to the legal phases which may be involved. A recent decision of the Appellate Division of the Supreme Court of New York State establishes an important precedent, not alone for this State, but for many others which have passed laws dealing with the subject of commissions.

On February 14, 1908, the above court, to which the case had been carried on appeal by the plaintiff, who had lost in the two lower courts, rendered a decision sustaining the judgment against the plaintiff.

The decision was in the matter of a manufacturer who sued a jobber for \$1,555 due for goods ordered and accepted by the jobber, who admitted these facts. As a defense the jobber set forth that one of his en:ployers-the buyer-had accepted from the manufacturer the sum of \$75, being approximately a 5 per cent, tip or commission, in violation of the Saxe Anti-Tipping law passed by the legislature in 1905, which makes it a misdemeanor to offer a gift, bribe or commission, discount or bonus to an agent, employe or servant with intention to influence his action in relation to his principal's, employer's, or master's business. Fines or imprisonment or both, are provided as penalties.

In the case before them, the justices of the Appellant Division held that the contract was void and unenforcible because of the manufacturer's act in bribing a purchasing agent of the jobber to the end that the latter should buy the goods of the former. The decision contained the statement that a contract secured by fraud and criminal acts is void and unenforcible for that reason alone. This carried with it the unusual decision that the principal could accept and use the goods obtained and yet refuse to pay for them on the ground that the seller had been guilty of an illegal act, and one that was contrary to public policy, in inducing the sale.

The result of this decision of the highest tribunal will be far reaching, and if one or two of the cut rate, second hand dealers, who are successful in securing the patronage of a certain class of chauffeurs because of the commissions which they pay to them, find that their bills are outlawed by the very act with which they succeeded in getting the business, they will probably yell loud and long and then, perhaps, fold their tents and quietly sneak away under cover of darkness.

MODULATING SOUND TO SAVE WEAR

Startling Theory of the Relation of Noise to the Life of Parts—Its Application to Car Design.

Nothing could seem more absurd from the utilitarian point of view than the notion of "tuning" the mechanism of the motor car, exactly as a piano or an organ is tuned, with the two-fold object of modulating the plaint of its moving parts to a state of pleasing harmony, and reducing the wear to a minimum. Were it proposed to tune the parts with the single object of reducing the sound to melodious accord, the idea would appear tenable. But to speak of tuning the car, in the sense of proportioning its parts to reduce their vibration to a minimum, in order to prolong the life of the mechanism is so radical a proposition as to require demonstration. Yet such is the unique proposal offered in a paper read before the Society of Automobile Engineers by John Magee Ellsworth and Thomas J. Fav.

"Of the refinements constantly going on in automobiles there are some so far below the surface as not to attract the notice of even designers of some automobiles," is the broad introductory observation. It is a matter of common knowledge that "an attractive color" and a "noiseless performance," will do more to sell a car than "all the talk about quality of material and duplication of parts" that can be formulated by the most glib-tongued of salesmen.

The natural assumption is that these are at best but superficial criterions. Yet such is not apt to be the case as a rule. For instance, "it is not usual to discover a \$1,900 body on a \$900 chassis, and, on the whole a good looking body is a good sign." But the public which so insistently stipulates a good-looking body, also requires a silent performance. "Is it because the noise is more disagreeable than the noise of a trolley car, to which the public's ear has long been trained? The salesman who sees no more in this gross discrimination is still an infant in the automobile business, with the chances in favor of remaining a dwarf until the hay wagon comes to take him back home.

"The real attraction about noiseless performance is not to be rid of the noise at all, because, no sooner is the noise dismissed than a muffler cut-out is demanded, not because of utility, but to make a noise," continues the paper in question. "The real attraction about noiselessness in the performance of an automobile is quite another matter. Noise in machinery is the surest sign of a high cost of maintenance that can be read. Noise is the product of vibration, and vibration is the manifestation of the oozing life of the material, just as the tick of a watch measures the lapse of time. It

is passing strange that one can learn on a page in a book that steel is subject to fatigue, that its dynamic ability is limited, that vibrations are of the greatest detriment to the steel, and turn the pages of the book, there to be told that flexibility is the desirable element in an automobile.

"To analyze sound is to investigate vibration, and since it is to vibrations we must look for the microbe that destroys the steel in the automobile, it is from the analysis of sound that some profit will be derived. . . . Sound would scarcely be a guide to go by were automobiles run in vacuo, because then the vibrations would be present without the accompanying sound to serve as a warning."

Sound manifestations depend upon the three well-known elements of pitch, intensity and timbre, expressing the number of vibrations to which the sounding body is subjected, the amplitude of those vibrations, and the quality of the tone, which depends upon the mingling of the elemental tones, or, literally, sound-color. The pure tone is the product of but a single set of vibrations; the complex tone is the product of several sets of vibrations, differing both in pitch and intensity, which combine to produce an effect which may be either harmonious or discordant according to their nature and arrangement.

Merely subduing a sound, or muffling it, does not affect the vibration which is its cause. But by so designing the vibrating element as to produce pure, or at least, harmonious sound, it is possible not only to secure an effect which is not distasteful to the ear, but also is less injurious to the vibrating body itself. For discord aside from being disturbing to the nervous system, indicates a disturbance to the molecular structure of the vibrating medium which is exactly parallel to the tremor of the distraught nerve. As the authors summarize the idea:

"Noise, as distinguished from sonorous sounds, that is to say, discords, are the most undesirable; not because the ear rebels, but for the indication of unwholesome vibrations that must in the end quench the life out of the steel. Next to the din of unwholesome noise, there are the notes, operatic treble contortions, telling of high pitch waves, with the consequent high rate of vibration per second of time.

"The real automobile (the car the purchaser asks for) goes along the road almost silently, or quite so in the better illustrations. If there is a sound 'tis the beat of the multiple of base organ pipes, and it tells a story that the owner of the car repeats, the one the echo of the other, the whole in accord. Can an automobile be deliberately designed with the idea of fixing the pitch, intensity and the 'klangfarbe?' Certainly. This is probably the reason why some automobiles are so very popular. They are so designed. They are a living example of the difference between design and contrivance. The chances are even the contrivers of cars do try to render

their handiwork less noisy than they are, but, instead of going about it in a way to produce base chords, they muffle the noise as best they can.

"To make a success of a matter of this sort, it is necessary to take into account the laws that sounds obey. The propogation of sound waves follows out certain schemes of nature, the knowledge of which is essential to success.

"It would not be necessary to discuss the sound or the phenomena resulting if it were possible to prevent the members of the automobile from vibrating. To do this is to so shape them as to render them immune from vibrating tendencies. By looking into the question of the vibrations in members it may be possible to glean a clew as to the direction of minimum risk. To proceed is to divide the several members into the classes in which they will appeal to the designer, one method is as follows: (a) Cantilevers; members held at one end. (b) Members fixed at both ends. (c) Discs, circular; held at the axis. (d) Flat surfaces. (e) Tubes. . . .

"In the automobile it will be possible to resolve nearly, if not quite, every member into the one or the other of the shapes as above set down; hence if definite information can be had in relation to the shapes involved, it will be possible to do something about the question of the resultant sound. There is one other point, i. e., the sound may be due, not to shape, but to the juxtaposition of two relating members. It may not be so much to echos that such sounds will be due, and the chances are that the broad question of accoustics will be involved, that is, sounds may be reflected, deflected, refracted, diffracted and put into interference. Under all these conditions, it is quite possible to predict that whilst the members may not (unaided) produce sounds of a nature to be condemned, the workings of the parts in juxtaposition might result in sounds not to be tolerated.

"Were it not for the fact that it is the vibrations that should be suspended rather than the noise to be dampened, the simple solution would be to 'devise the machinery so as to have it within a hermetically sealed chamber and exhaust the air." Then there would be no noise at all."

By way of illustrating how the principles of sound phenomena may be applied to the design of the automobile the intensity of sound is considered a little more closely. "This property of sound," say the authors. "varies inversely in the square of the distance. Compressing the air or the medium, whatever it may be, increases the intensity of the sound. The intensity of sound is, of course, secondary to the fact of its production, and in that production certain laws may be taken into account.

"In tensioning members, assuming a uniform section, the effect of changes in length, section and tension will affect the sound as follows: (a) The number of vibrations in a given time are inversely as the length,

considering a constant tension. (b) The number of vibrations in a given time will be inversely as the diameter, considering a given length and a given tension. (c) The number of vibrations in a given time are as the square root of the tension, considering a constant length and section.

"Obviously, changing the material alters the vibrations, or if the molecular structure changes the number of the vibrations in a given time will change also. Here we have a fine way to note the effect of service on material, since, if the parts are investigated when new to ascertain their value in vibrations per second, the effect of time and service will be noted by the simple expedients of subjecting them to duplicate tests, from time to time. This method of investigation might also be called into play to ascertain if the parts are up to a predetermined standard, since, if the value in vibrations be not the same the material will be either different or in a different state.

"It matters not at all, if the change is because of a difference in the micro-structure rather than the substitution of a different material, since the service might even be worse for an altered material. It was said, if the member is changed in length the vibrations would change inversely as the length. That is to say, if a member is of increasing length it will have decreasing numbers of vibrations, provided the section and the tension are held the same. By this law, one should have parts of the greatest possible length if it is the desire to have the vibrations of the least number.

"It was also said the vibrations are inversely as the diameter. That is, if the diameter is doubled, the vibrations will be halved. In this law is evidence of the fact that short, stubby parts will vibrate the least if the tension is the same. But it was said, if the tension is increased the vibrations would increase, as the square root of the increase in tension. Here is evidence of the desirability of holding to a low tension in pounds per square inch of section, or what amounts to the same thing, a low tension in proportion to the static ability of the material.

"On the whole, then, these laws cry for conditions as follows:

"(I) If the length of a member is short, it should have a considerable sectional area in all planes subject to vibration, to hold the latter as low as possible.

"(II) To hold the vibrations as low as possible the section should be great, no matter what the length.

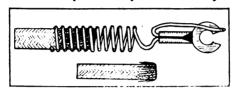
"(III) The static ability of the material should be very great in proportion to the static load. This dictum stands for other reasons, as for illustration: The dynamic life (expectation) depends not only upon the number of the vibrations per second of time, but upon the extreme fiber strain to which the member is worked during the period of vibration.

"It is the bell, the tube, the sounding board, and the tuning fork phenomena that are responsible for the sounds and the noise alike in the automobile. Eliminate the bell, abandon the clapper, put kinks in the sounding board, shorten the tube, and stiffen the tuning fork, and the automobile 'will fold its tent like the Arabs and as silently steal away.'"

Terminal Connection with a Spring.

One of those ingenious little devices which appears well worth while and which has had practical usage and serves practical purposes, is the terminal connection for battery, spark plug or coil, which just has been patented by Harry Read, an automobile engineman in the employ of the department of street cleaning of New York City.

The intention of the inventor was to produce a flexible terminal which would overcome the frequent annoyance caused by the



breaking of the wire, due to vibration. This has been accomplished by the use of a spiral spring. But additional features have been added by bringing the straight end of the wire, of which the spring is made, around by the side of the slot in the terminal where it serves to keep the nut tight by pressing against it. This end serves the additional purpose of being available for insertion in the hole in a dry battery pole where provision is made for only this form of contact.

Not the least original of the ideas incorporated in the Read terminal is the method of attaching it to the wire of either the primary or secondary circuit. Having removed the insulation, the bared wires are simply spread back over the outside of the insulated wire as shown in the illustration; the coiled spring can be screwed on, the insulated portion of the wire over the bared ends, thus securing a relatively large area of contact surface and obtaining a practically permanent connection the use of solder, as any strain on the spring serves to contract its diameter as it is lengthened, in this manner a tight connection, which yet may be readily removed, is possible.

Proper Use of Wrenches.

One of the great temptations when giving a car a general overhauling, or even when only one or two loose nuts need tightening, is to resort to a convenient monkey wrench, as this tool is quickly adjusted to take either the large or small nuts. But there is danger in doing that sort of thing as the purchase which is obtained when a ten or twelve inch wrench is employed is far in excess of that which is needed for properly tightening a small nut and it is a difficult matter to make proper allowances for this purchase so that the bolt shall not be twisted off. A better plan is to have at hand

an assortment of solid or S wrenches, as these are designed to the end that their length will be proportionate to the amount of the strain which should be put on the nut that they are made to fit, and it is a rare occurrence to destroy a bolt when one of these is used, unless the very purpose of the wrench is defeated by the use of a length of pipe, to obtain a greater leverage, being put on the wrench.

History in a Maxwell-Briscoe Souvenir.

"Faith and Its Realization, the Story of an Industrial Accomplishment," is the title of a new publication of the Maxwell-Briscoe Motor Co. The book gives an interesting history of the beginnings of the new factory of the company at Newcastle, Ind., and chronicles and illustrates the ceremonies of the corner stone laying. Value is added to the book by the reproduction of the speech delivered on the occasion by Vice-President Fairbanks, who. himself a native of the State of Indiana, laid the corner stone and made an eloquent address dealing with the rapid development of our national industries and the solution of national problems.

Don't Use Pliers on the Spark Plug.

While it is desirable that the contact between the spark plug and secondary terminal should be as secure as possible, it is unwise to resort to pliers for the purpose of tightening the binding nut on top of the plug. When tools are used to make this connection secure, it frequently happens that the porcelain is broken or that the entire core of the plug is turned, so that the distance between its sparking points is sufficiently altered to effect the travel of the spark so that it is forced to jump more or less than the 1-32 which is usually the required distance to obtain the best results.

One of the Cold Weather Precautions.

A rare, though possible accompaniment of cold weather arises from the collection of an undue amount of moisture in the airpipe leading from the engine to the fuel tank in a car equipped with the pressure system of carburetter feed. The result is a choking off of the pressure line, either partial or complete, which occurs after the car has been permitted to stand in the cold for some little time. Where it is impossible to disconnect the piping handily, the most obvious and satisfactory remedy is to swathe the line with cloths wrung out in hot water.

Garage Crap Game Raided.

The garage of the Roseville Motor Co., at Orange and Fourteenth streets, Newark. N. J., was raided by the police at 4 o'clock Saturday morning last. The police found nine men "shooting crap" and each was fined \$10, when later arraigned. None of the men arrested were employed at the garage, however, entrance having been effected by a chauffeur who had a car stored there.



DEVELOPMENT OF THE SPARK PLUG

Refinement of Construction without Radical Change of Form—Old and New
Types and Their Features.

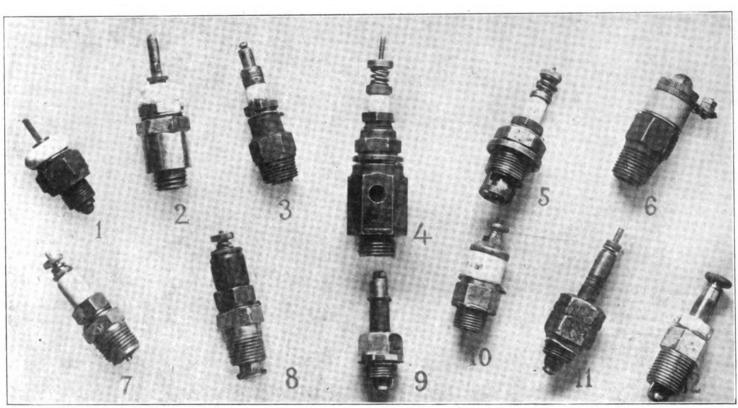
While there is little resemblance in the gas engines of to-day to those of six or seven years ago, the same statement cannot be made in reference to the spark plug, which, despite considerable refinement, retains the same general form and construction that it has had from the beginning.

Since the earliest days of the jump spark there has been almost no change in the

obsolete French types which found favor in 1900-01. The former known by various names in this country, is possibly best remembered as the G. C. S. Bougie; the core of it is much like a cylindrical metal ball, while No. 3 is the early De Dion, of which there were many imitations; the terminals in this were short curved wires. No. 2 is a plug that is well known on the other side of the pond, and which has found some favor on this. Like the other two in the group this "Pognon exporta" has the wire terminal incased in porcelain, the features of it being the socalled hollow, or cup, porcelain that permits of a greater sparking surface. The Pognon presents an unusual appearance

The two others on the top row, Nos. 5 and 6, represent types in which the center core differs from many because of its shape; in the former a pear shaped metal extends to a point near the circular metal band which is mounted on the body of the plug, the point of the pear serving as the terminal from which the spark jumps. This plug is rarely if ever seen now. No. 6 is the well known Herz, unusual in shape and having a distinguishing feature in the substitution of stone or lava in place of porcelain. The electrode in this plug is round and occupies nearly all of the base to which the spark jumps from a slight projection on the core.

Two entirely modern and well known



OLD AND NEW TYPES OF THE SPAKK PLUG

principles of the plug. Though the first models were frequently found with two or three bushings, a.gasket or two and occasionally some device or contrivance for injecting a priming charge into the cylinder through the plug, the general principle of a core and base, so arranged that the spark jumped from the former to the latter, was, in effect, the same then as it is now. While this principle has been carried out in a great number and variety of ways, the changes have merely been in some small and unimportant detail, which has had no bearing on the general shape of the plug itself, but has served only to carry out the theories of the makers.

Dividing into groups the plugs shown in the illustration, it is seen that the group consisting of Nos. 1, 2 and 3, have a center core of porcelain, through which is carried the terminal. The plugs Nos. 1 and 3 are because of the great amount of metal used in the base; in this respect it is entirely unlike any of the others in demand at this time, as the general tendency is toward compactness.

No. 4, the "Non-Stop," is the invention of A. W. King, at one time interested in the manufacture of the Gasmobile. This plug which appeared in 1902, is entirely different from any that have been offered for public use. Large and cumbersome, it was constructed to contain a firing chamber into which a priming charge could be easily injected through a pet cock screwed into the hole in the lower shell. An idea of its size may be obtained by comparison with the plug pictured beneath it, a modern "Jewel." the whole of which barely equals in length the distance from the bottom to the lowest hexagon nut of the larger plug.

plugs, the "Miller" and "Spitfire," Nos. 7 and 8, respectively, serve to illustrate different ways of working out the same idea. The claim for both of these is that they can not be fouled by carbon deposits or short circuited by oil. In the Miller plug the results are obtained by retaining for air space the entire interior of the base. The porcelain insulation comes only to the top of the shell where it is secured by a bushing; no insulation is in the base, the terminal of heavy wire being sufficiently rigid to retain its position. The other plug, the "Spitfire," is much like this in that a large area of air space is retained, the difference being that a hood or cap offers the surface for the grounding of the plug. A characteristic of this plug is a fiber shield to protect the porcelain.

The "Jewel," No. 9, needs no description. Its reproduction here serves to dem-



ABOUT CHOICE OF LUBRICANTS

Meaning and Importance of the "Flash Test" and "Viscosity"-Why Mineral Oils are the Best.

gaskets and even springs. The last three plugs depicted are of interest because of the introduction of a different principle. In No. 10, the core is hollow and contains a valve seat into which a ball is forced by the compression stroke of the piston; on the suction stroke air is taken in through the core, the object being to correct the mixture by the additional air which also serves to keep the contacts clean. This plug, known as the H. M., did

not attain great popularity, and soon after

onstrate the simplicity of present construc-

tion in contrast to the productions of a few years ago when a quantity of body metal

was surmounted by a series of bushings.

its introduction in 1905, was withdrawn from the market.

The other two of this group, Nos. 11 and 12, are examples of a vibrating plug first introduced this year. No. 11 is the original model from which the other has developed. This plug consists of three parts, the base, the bushing and the core. The core is the usual form employed in mica plugs, but has a brass tubing, with a shoulder, incorporated in it. In the bushing is a valve seat into which the core shoulder fits; the suction and compression strokes of the engine piston keep the plug core in rapid movement and by this movement carbon deposits are prevented.

With the exception of the vibrating plugs and the mammoth No. 4, all the plugs shown in the illustration are practically alike, save for the slight differences which have been described.

Odd Substitute for Valve Spring.

The "mother of invention" is responsible for many happy solutions of difficulties which might have caused almost endless annoyance. This was recently illustrated when a motorist suffered the inconvenience of a broken intake valve spring while on a country road, far from repair shops or stores, where material for temporary repairs could be obtained.

Though the mishap was small in itself the consequences were annoying as one cylinder was effectually crippled by the break. But the difficulty was there and the means for overcoming it at hand. When the fertile brain, spurred by the prospect of a delayed trip, suggested the use of a piece of spiral spring such as could be obtained from a window shade roller. At the first house the ownership of the interior mechanism of a window curtain changed hands for a slight consideration, and after cutting it to the proper size for its new use, the ingenious motorist went on his way rejoicing.

Doubles Output of Alumaloyd Sheets.

Since the Stark Rolling Mills Co., Canton, Ohio, added alumaloyd sheets to their productions, the capacity of that department has been doubled. The material found an almost instant demand from the automobile trade.

It is a safe assertion that at least 99 out of every 100 motorists give time and thought to the questions which arise in the selection of the various accessories with which they equip their cars. If a speedometer is wanted, it does not follow that the first one which may be suggested will be bought, but rather that an investigation into the merits of the different ones will be made, and that which is finally selected will be the choice because of certain qualities which it possesses that appeal to the purchaser who thinks it the one best adapted to either his use or his pocketbook-and the price is not always the determining factor.

This same reasoning and investigation is applied to all the other minor parts of his equipment whether it be spark plugs or storage batteries, clocks, tops or wind shields. And yet one of, if not, the most important of the supplies which have to be bought is selected without consideration or intelligent inquiry as to its merits and is used with an absolute disregard of its possible effect on the power plant, and that is the lubricating oil.

The motorist may say that he is helpless in the matter of selection of a proper lubricant; and to a certain extent this is true. It is very probable that little meaning would be conveyed to him if he was told that a certain oil had a "flash" of 425, and as for the word "viscosity," it suggests something remote, if it suggests anything at all

But, as an actual fact, does the average automobilist know the difference between a babbited bearing and one made of white bronze? Can he tell which is preferable? Does he know anything about the r.p.m. of his flywheel, or care? And yet before the purchase of a car is made, catalogues are conned, friends interrogated, and every precaution is taken to get the best that can be found within certain limitations.

But the question of a proper oil rarely is considered. The agent says get the P. D. Q. brand; a friend suggests something else and the bewildered owner tries both, though neither may be entirely suited to his particular type of car.

The essential point in the lubrication of an automobile is to have an oil that will be consumed by the heat generated in the cylinder, and at the same time, be high enough in flash so as not to be consumed too quickly. If it is too high in flash, the result is distillation, which leaves behind a heavy deposit that becomes carbon and causes the trouble that motorists are familiar with. In a water cooled cylinder this is very apt to occur, as the walls of the cylinder are comparatively cool.

"Flash," it may be well to explain, is the temperature at which the vapor from the oil will ignite, and when the expression "425 flash" is used it signifies that the vapor from the oil will be ignited at a temperature of 425 degrees Fahrenheit, and incidentally this is just the test that is most desirable in the lubrication of a watercooled engine. In the air-cooled cylinder a different condition exists, as the much higher temperature to which the cylinder walls are heated would at once consume an oil that would serve perfectly in a watercooled machine, and the destruction or consumption of the oil would occur before it had performed its lubricating functions.

In seeking a proper lubricant, care should be taken to obtain an oil which will not "gum" or cause corrosion or oxidation. Oils containing a large amount of animal matter should be avoided as the action of the animal oils on metals is deleterious unless all the fatty acids have been extracted, and where it is used for splash lubrication the oil is apt to saponify, making a clotted mass in the crank case far too dense to permit of a sufficient portion of it reaching the bearings and cylinder walls. Animal fats have no special value as lubricants, as compared with mineral oils, and the use of them simply increases the cost without adding to their efficiency.

Where animal oils are used there is little benefit derived, as these contain oleic and stearic acids and quickly form a soapy mass when beaten or churned by the crank. As an engine lubricant they are almost an utter failure and have the additional bad feature of deleterous effect on the metals.

If consumers would obtain the oil best suited for their purpose, inquiry at any oil dealer's would result in getting a mineral lubricant with a flash test of about 425 degrees for the water cooled cylinder, or from 475 to 525 for air cooled, and which is not to viscious or dense. Animal and most vegetable oils should be avoided for reasons already stated.

Melancholy Sequel to a Merry Ride.

It was a merry automobile ride that Charles Clark and Edwin Stuetlich took the other night in Milwaukee in a stolen automobile, so the police say. Clark went to the beer city some time ago from the East, to perfect himself in the knowledge of automobile parts manufactured by the A. O. Smith Co. While feeling festive, it is charged, Clark, accompanied by his friend Stuetlich, broke into the factory by smashing a door, took out an automobile and raced recklessly about the city. Next morning the car was found abandoned. In passing sentence Judge Neelan remarked that Clark might spend the next ninety days gaining useful information about the construction of chairs. Sentence was pended on Stuetlich.



LIGHT ON "UNIVERSAL LIGHTS" LAW

Massachusetts Legislative Committee Hears
Arguments in Its Favor—Horse Drivers and Automobilists Agree.

Much light was shed on the question of requiring all vehicles to carry lights at night during a hearing given by the Massachusetts legislatve committee on roads and bridges on the 25th ult. The Massachusetts State Automobile Association, the Bay State Automobile Association, the Safe Roads Automobile Association, the Automobile Owners' Association and several of the leading automobile clubs in the State had representatives at the capitol in Boston, and there were present, also, an anti-automobile element represented by General Luther Stevenson of Hingham, who said he appeared in behalf of nine-tenths of the people of the Commonwealth who want more stringent regulation of motor vehicles. He read a long dissertation on the evils of the automobile.

While the hearing was intended to cover several of the automobile measures pending in the legislature the greater portion of the time occupied was given to the two "universal lights" bills. The codification measure was left until late in the session, at the suggestion of Colonel William D. Sohier. president of the Safe Roads Association, who made the suggestion with the view that any codification which is made can include amendments made this year. The two bills relating to number plates also were de-ferred on the representation of Colonel Sohier that a new bill had been drafted to cover the carrying of numbers on cars from outside the State, substantially as required of Massachusetts cars, and the proposal to make it a heavily punishable offense to drive a car without its number.

Of the "lights" bills, one entered by E. WentworthPrescott was taken up first. In advocating the proposed legislation Mr. Prescott related his experience in driving a horse and carriage, and said that he had had one collision and numerous narrow escapes because he was unable to see other vehicles using rubber tires. In his opinion the passage of the bill is necessary as a protection to life. There are often accidents caused by fire trucks running down carriages which cannot be seen on the roads. Automobiles are required by law to carry lamps, and other vehicles ought to be compelled to do the same for the protection of their owners and occupants. Mr. Prescott said he thought the Safe Roads Association bill would cover the point better than his measure.

Colonel Sohier thought it would be difficult to require that the light be seen in all directions; the term "visible" would seem to be a sufficient requirement. In most of the country districts the farmers generally carry lanterns at night hung under an axle, but the few teams without lanterns are the ones that cause trouble.

Elliott C. Lee, president of the Massachusetts State Automobile Association, favored having the light so placed that it could be seen both from front and back. In Europe it is required that the light be carried on the side. He stated that the State Assotion has voted in favor of the "lights" bill. Ex-Representative Charles J. Weir, as legislative counsel of the State Association, said that it is not the desire of the petitioners to put a hardship upon anybody. The burden of preventing accidents is now put entirely upon the automobilists who have to carry, in order to protect themselves and others, acetylene lights in addition to the small lights required by law. In his opinion the majority of the farmers now recognize the necessity of carrying a light on their wagons. Mr. Weir said he saw no need of requiring lamps on sleighs. Colonel C. L. Young of the Springfield Automobile Club brought up the question whether the bill would interfere with the present automobile law regarding the carrying of lamps on motor vehicles. He thought that the two should be made uniform so that the farmers will not have to light their lights any earlier than the automobilists. thought that lights should be required from an hour after sunset until an hour before sunrise. Francis Hurtubis, Jr., in behalf of the Automobile Owners' Association, spoke briefly in favor of permitting the highway Commission to fix the place where the light shall be carried. In answer to questions by Representative Cook, Mr. Weir said that if the bill were passed the farmer without a light who was run into would have more trouble than at present in collecting damages.

Among others who spoke in favor of the bills was Vice-President L. R. Speare, of the American Automobile Association and chairman of the legislative committee of the State Association, who said that from talks he has had with farmers he had formed the opinion that most of them recognize the value of carrying a light. Dr. V. J. Irwin of Springfield, a driver of horses, said he favored the bill for his protection. Dr. Walter G. Chase called attention to the fact that in every civilized country vehicles are required to carry lights at night. Even in Malay states, where bullocks and cars are the principal means of locomotion, the carts must carry lights.

Speedway Talk at Salt Lake.

Salt Lake automobilists are interested in the proposition to build an exclusive automobile speedway between that city and Salt Air, a nearby pleasure resort. The road would be 15 miles long, 12 miles of the distance in a straight line. Although no details have been made public it is reported that the resort management and the local railway company are both interested in the proposition.

WILL RESIST DOUBLE TAXATION

Jersey Dealers to Oppose the Frelinghuysen Bill—If Enacted Its Constitutionality Will be Tested.

So far as the tradesmen of New Jersey, represented by the New Jersey State Automobile Dealers' Association, are concerned. there will be no more useless and longwinded debates with Senator Joseph S. Frelinghuysen looking toward a moderation in the proposed amendments to the New Jersey automobile law, contained in the bill introduced by Senator Frelinghuysen. These amendments consist of a sliding taxation of vehicles based upon horsepower, from \$3 to \$100 per year; a sliding scale for drivers' licenses, from \$1 to \$25; the granting "admission tickets" to non-resident motorists to use New Jersey's roads. at a cost of 50 cents per six days, and the abolition of manufacturers' and dealers' blanket licenses, besides several other minor changes.

That there will be no more conferences in regard to modification was shown Friday afternoon last, 28th ult., when the dealers held a meeting in Newark and decided to test the constitutionality of the licensing clause, if enacted.

The meeting of the trade association was an animated one and a resolution attacking the constitutionality of the proposed act was unanimously indorsed and a plan of battle decided upon. The meeting was attended by a majority of the members, all of whom were determined in the stand taken by the association. The resolution says that the association is unqualifiedly and unalterably opposed to the high, prohibitive and inequitable license fees proposed, and will seek the necessary funds by combining with the various automobile clubs of the State to test the constitutionality of the double taxation proposed under the form of license or registration. The resolution is as follows:

Resolved, That the New Jersey Automobile Trade Association, meeting in conference for further discussion of proposed amendments to the automobile law, is unqualifiedly and unalterably opposed to the high, prohibitive and inequitable license fees proposed, and that whatever funds be necessary to subscribe to the end of securing their defeat is hereby authorized. It is further

Resolved, That the New Jersey Automobile Trade Association combine with the various automobile clubs of the State and test the constitutionality of the double taxation proposed under the cloak of license or registration. That it is the opinion of this association that the constitutionality of this principle be tested in the highest courts, and that every effort be made to put automobilists on the same footing as every other user of the highways. Further, that this association is opposed to any change in the administration of the department, and that every economy should be practised and the department not be made a political ma-

chine to be used for political purposes. Also, that this association is in favor of a law requiring all vehicles to display lights at night, and that every influence be brought to bear to secure the enactment of such legislation.

R. A. Greene and W. H. Ellis of Newark, and George Blakeslee of Jersey City. were appointed a committee with full power to act, to confer with representatives from the associated automobile clubs of the State, to the end that a reasonable law be enacted which will meet with the approval and respect of every automobilist, resident and non-resident, using the highways of the State. The tradesmen will seek the aid of the Boards of Trade throughout the State in its fight.

The action of the dealers was made on the principle that the State should not exact from the automobilist in license fees more than is absolutely required for the carrying on of the work of the automobile department, certainly not a tax intended, in part or as a whole, for the maintenance of the State road system. This and other kindred points will come up for discussion at a meeting of representatives of the various associated automobile clubs of the State to be held at the New Jersey Automobile and Motor Club in Newark on Friday night of this week, 6th inst. Senator Frelinghuysen, father of the existing New Jersey automobile law and author of the proposed iniquitous amendments, has promised to attend and will doubtless learn just how "high" in the esteem of motorists he is held.

That the meeting will not be one for compromise, is made plain by the officials of the New Jersey organization. They emphatically state that they have abandoned the policy of concession and compromise which has governed their action for the last two years, and will make use of every power at their disposal, political as well as otherwise, to make their influence felt. The action of the dealers in passing the resolution is fully approved and concurred in by the Newark club, and it is thought that all the other clubs in the State will use every influence to prevent the passage of the proposed Frelinghuysen amendments even if they are reported from committee.

The North Jersey Automobile Club, which has its headquarters in Paterson, also has officially gone on record as opposed to the Frelinghuysen amendments, but the Patersonians imply a willingness to compromise, as evidenced in the following resolution, passed at the last meeting of the club:

Be it resolved, That the North Jersey Automobile Club strenuously opposes the automobile bill and its proposed amendments politically and legally, unless we can obtain the following changes: A reasonable speed limit; reciprocal privileges to foreign automobilists; elimination of the persecution by constables and justices of the peace.

It is evident that the fight against unjust legislation as practiced upon automobilists in New Jersey is not going to be a half-hearted affair, as it has been in the past. New Jersey numbers several thousand influential citizens among its motorists, and their inuuence with members of the legislature doubtless will make itself felt if the aggressiveness which already has been manifested is continued in the fight against unjust automobile legislation, and there is no reason to expect a change in attitude.

Automobile Freight Line Project.

An automobile freight company to operate between Camden and Atlantic City, N. J., is said to be in progress of formation, following the successful inauguration of a similar service by a large Camden concern which does considerable business with Atlantic City. As yet the names of the backers of the new project have been kept in the background. It is declared that the Camden firm saves \$60 on every load of goods it sends to Atlantic City, over what it would cost to send the same merchandise by railroad or trolley, and it is this fact which has prompted the formation of a regular express service between Camden, which virtually would mean Philadelphia, and the seashore resort. In view of the hard, level roads all the way between Camden and Atlantic City, there is no doubt of an automobile express service being possible.



FOR

Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

TRONG—DURABLE
CALELESS—RUSTLESS
MOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver

THE STARK ROLLING MILL COMPANY, CANTON, OHIO

Automobilist Scores a Legal Point.

The question whether an automobile is a road vehicle in the ordinary acceptation of the term has arisen in one of the Pennsylivania courts, and an opinion has been handed down which, as far as it goes, is in contrast with the recent decision of the Massachusetts Supreme Court, denying that roads must be made safe and convenient for automobiles. W. W. Scranton is prosecuting a suit having as an ultimate object the opening to automobiles of the Laurel Run turnpike, the action having been filed in the court at Wilkes-Barre.

Mr. Scranton was refused the privileges of that road while driving a car from Scranton to Wilkes-Barre and his action is based on that refusal. The turnpike company in replying to his bill of particulars averred that the automobile is a vehicle not available for the road; that the turnpike was not built for motor machines, and that an automobile is a conveyance not generally used, and much different from a carriage to which horses are attached. Scranton met these averments by the contention that they

are immaterial, improper and impertinent. This view was taken by Judge Lynch, who handed down an opinion on the 27th ult., ordering the averments stricken from the answer.

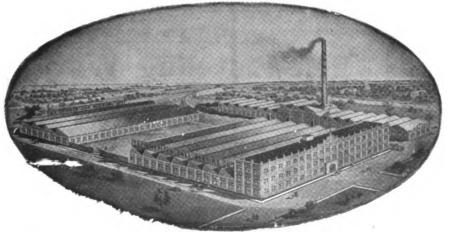
Mail Carrier's Profitable Automobile.

Emporia, Kan., has a motoring mail carrier in the person of George E. Mays, who covers a 27-mile route leading out of the city. Mays began carrying mail in 1894, and the high prices for horses and feed and the expense for buggies and harness led him to think of the automobile. Securing permission from the authorities at Washington, Mays purchased a runabout, and has been using it successfully in the delivery of mail. With horses it formerly took him from six to seven hours to cover his route; now, three hours is sufficient. He has kept tabs on running expenses and states that 30 to 35 cents for gasolene and oil per trip is all that it has cost him. After the mail is delivered each day Mays uses his car for livery purposes, thus adding materially to his income.

Quick Work in Mail Delivery.

Practical demonstration of the value of the automobile for mail service was made last Saturday, 29th ult., by James Miller, Jr., who covers the West Hartford rural free delivery route, in Connecticut. Miller's route is approximately 221/2 miles in length and the average time required for covering it is about five hours. On Saturday morning Miller started out with a small runabout, and was timed by Postmaster F. M. Buckland. He had to make a larger number of stops than usual on account of a flood of advertising postal cards, the total of stops at mail boxes numbering 190. The time occupied was 1 hour and 55 minutes. Much of the highway traveled was rough and icy. Miller's outfit includes two horses and he thinks of making a permanent change to the automobile, estimating that not only would the cost of gasolene, oil and ordinary repairs be less than that of maintaining his horses, but unusual repairs and wear would be offset by the occasional loss of one of the faithful but hard worked animals





The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park
CLEVELAND, OHIO, U.S. A.







THE SOLAR NAMEPLATE on a lamp or generator is a **POSITIVE GUARANTEE to the user** that he has the BEST in lighting equipment.

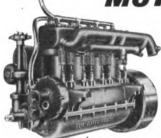
Solar Lamps have more brass—less solder - and riveted parts; therefore more durable. Fewer parts—therefore more simple in construction. Special Bausch & Lomb mirrors—and each lamp tested as to accuracy of focus: therefore better light. Specify Solar —the **standard** lamp of the automobile.

Badger Brass Manufacturing Company

Two Factories:

KENOSHA, WIS., 436 11th Ave., NEW YORK

MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.



Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. We do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. As grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind.

IF YOU ARE INTERESTED IN MOTORCYCLES

The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

\$2.00 Per Year

Specimen Copies Gratis

The Week's Patents.

875,542. Tire Valve Stem Protector. Charles W. Lurtey, Little Rock, Ark. Filed May 15, 1906. Serial No. 316,900.

The combination with a tire having inner and outer sections, of a valve stem machanism projecting from the tire, and a stem protector comprising a base plate that is located between the tire sections, said plate being longitudinally and transversely curved, and an open ended sleeve projecting from the base plate and from the tire and surrounding the projecting portion of the valve stem.

875,556. Vehicle Fender. Schureman, Chicago, Ill., assignor to Appliance Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1907. Serial No. 358,616.

1. A vehicle fender comprising, in combination, an impact bar, supporting rods connected with said bar, guiding supports adapted to be secured to the sides of a vesupported between their ends, cushioning means for the bar interposed between it and said guiding supports, and guide brackets adapted to be secured on opposite sides of a vehicle and having elongated guide slots in which the rear ends of said rods are removably confined.

875,693. Vehicle Spring Check. Herbert Cottrell, Newark, N. J. Filed Jan. 9, 1907. Serial No. 351,410.

1. A vehicle spring check, comprising a longitudinally divided clamping case, adapted to be attached to vehicle body, and to be adjusted in clamping frictional contact with an internal cylindrical crank hub provided with circumferential wedge rings upon its surface, and a lever arm and connecting rod, to attach to lower spring or axle; to resist rapid spring compression or extension; substantiall as described.

875.716. Carburetter for Explosive Engines. Adele A. Longuemare, Paris, France. Filed Nov. 11, 1905. Serial No. 286.878.

1. In a carburetter the combination of an atomizer for the fuel, a choke tube surrounding the atomizer, said choke tube comprising the frusta of two hollow cones connected by their smaller ends, a valve seat formed by the base of the lower frustum, a supplemental air valve adapted to fit the valve seat on the choke tube, an inclosing casing surrounding the air valve, a helical spring arranged between the top of the valve and the casing and adapted to press the valve upon its seat, said spring being capable of being overcome by a reduction of pressure within the casing, and means for controlling the movement of the valve substantially as set forth.

875,726. Vehicle Wheel and Tire Therefor, Valentine H. McDowell, Lynn, Mass Filed Sept. 14, 1906. Serial No. 334,641.

1. An elastic tire adapted to contain air, and provided with a plurality of clencher engaging flanges separated by a space at each edge of its base portion, the body of the tire and said flanges being reinforced by continuous textile fabric embedded therein.

Shock Absorber. Lawrence 875,759. Whitcomb, Brookline, Mass. Filed July 10, 1907. Serial No. 383,044.

1. In a shock absorber, in combination, a hollow member capable of being attached to the vehicle spring or axle, a co-operating member with said hollow member, cork inserts in one of said parts, an expander, a threaded rod secured to said expander, a

threaded sleeve or nut adjustable on said threaded rod and engaging said co-operating member to limit the movement of said expanded and thereby regulate the pressure of said co-operating member, substantially as described.

875,766. Vehicle Attachment. Frank R Allen, Passaic, N. J. Filed May 15, 1907. Serial No. 373,736.

In combination with a vehicle body, and the running gear thereof, strips secured to the under side of said body, tracks secured to the running gear and being disposed in vertical alignment with said strips, and guiding members each having a horizon-tal portion between said strips and tracks and a downwardly and inwardly extending part engaging the top, side and bottom faces of said tracks.

875,800. Friction Clutch Pulley. John Gilson, Port Washington, Wis., assignor to Gilson Manufacturing Company, Washington, Wis., a Corporation. Filed May 11, 1907. Serial No. 373,061.

1. In a friction pulley, the combination with a rotatable shaft, of a clutch member fixed thereon and having a hub and friction disc, a bolt loosely engaging the hub at one end and threaded at its other end, a second clutch member slidable upon the outer end of the hub and rotatably engaging the bolt,

Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order.

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

"AURORA" THE

Runabout \$775—20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS,

Aurora, Ill.

Let me send to you the new Maxwell catalogue, which is one of the few catalogues that really tells things. Let me give you the name of the Maxwell representative in your locality. He will be glad to give you a demonstration or refer you to Maxwell owners.

efer you to Maxwell owners.

MAXWELL-BRISCOE MOTOR CO.

Members A. M. C. M. A.

x 106

Tarrytown, New York P. O. Box 106

WANTS AND FOR S

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

W ANTED—Position by man of good appearance and education and engineering ability; thoroughly familiar with gas and steam engines and automobiles generally. Competent to design, drive or sell. E. W. G., care Motor World.

FOR SALE—No. 14 sliding gear transmissions; 90 bodies, primed only; 75 bodies, painted only; 72 bodies, painted and trimmed; 69 sets bevel drive axles and hubs; 130 frames, unassembled; 30 frames, assembled; 35 radiators; 50 tanks; 59 two cylinder opposed engines, 5½5; 105 sets springs; 48 mufflers; 98 sets universal joints; 47 steering wheels, 14-inch; also various quantity of other parts, all suitable for 2,000 pound touring car or runabout. RANDS MFG. CO., Detroit, Mich.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can season. Write me to see now much I can save you on others sacrifice price. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

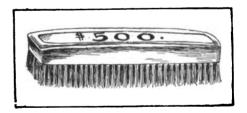
FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

THE METEOR 50 H.P.

The Car that does things

For Particulars, Address

METEOR MOTOR CAR CO., Bettendorf, Ia.



THE THOMAS

AMERICA'S ONLY ENTRY

NEW YORK-PARIS RAGE



50 HP TYPE C

WITH MACHETO 3000.00

PENNSYLVANIA AUTO MOTOR CO.,

Bryn Mawr, Pa.

and

Luxurious

Completely

Appointed

Digitized by Google

2800 LB4 2800.ºº

Of the highest possible grade throughout.

a pulley loosely mounted on the hub of the fixed clutch member between the friction disc and slidable clutch member, and a nut adapted to move the slidable clutch member against the outer end of the pulley.

875,892. Mechanical Movement. Tracy V. Buckwalter, Altoona, Pa. Filed March 21, 1907. Serial No. 363,558.

1. The combination of a shaft, a wheel, a universal joint having a pivotal connection to said shaft and a pivotal connection within said wheel, a wheel movable about an axis transverse to said shaft, and means for connecting said wheels so that one is driven from the other.

875,907. Sparking Device. Benjamin G. Gilbough, Chicago, Ill. Filed Dec. 26, 1906. Serial No. 349,554.

1. In a sparking device, the combination of a tubular plug adapted for connection with an engine cylinder, a cylinder mounted thereon and in communication with said plug, a piston movable in said cylinder and having a stem projecting beyond the outer end of the cylinder, a vibratory electrode extending into said tubular plug, an actuating member for said vibratory electrode, and a pawl connected with said actuating member located in the path of the piston-stem, whereby the piston serves during its outward movement to move said actuating member through the medium of said pawl, the pawl being so arranged with relation to the piston stem as to be released to permit said actuating member to return to its normal position when the piston reaches the outer end of its traverse.

875,942. Acetylene Lamp and Lighting Device for Automobiles and Other Vehicles. Svend M. Meyer, New York, N. Y., assignor to George Clinton Batcheller, New York, N. Y. Filed Dec. 21, 1905. Serial No. 292,852.

1. An acetylene lamp and self-lighting system for vehicles comprising an acetylene generator and an electric battery mounted together in a connecting frame; a series of suitably arranged lamps, conductors connecting from the battery to the several lamps and a switch closing the circuits through the several lamps for lighting selected lamps at the will of the operator, subtsantially as described.

875,991. Air Cooling Apparatus for Explosive Engines. John E. Gilson, Port Washington, Wis., assignor to Gilson Man ufacturing Company, Port Washington, Wis. Filed May 16, 1907. Serial No. 374, 056.

1. An explosive engine cylinder, a rotary fan supported in connection with the cylinder parallel to same, and a circular casing for the fan having a hood extension inclined inward toward the axis of said fan beyond the cylinder head.

875,994. Tire. William D. Harris, Philadelphia, Pa., assignor to Harris Tire & Rubber Co., Philadelphia, Pa., a Corporation of Maine. Filed May 16. 1905, Serial No. 260,707. Renewed Feb. 2, 1907. Serial No. 355,472.

1. A tire including a body of fabric, a tread portion of resilient material outside of the same, and a series of fibers extending through the tread portion in a line substantially perpendicular to the wearing surface thereof and abutting upon a body of fabric, with a second body of fabric engaging said perpendicular fibers for spacing and holding them in position, substantially as described.

876.034. Steering Device for Automobiles

Thatcher P. Wilson and Walter W. Wilson, Longbeach, Cal. Filed March 11, 1907. Serial No. 361,642.

1. The herein described means to steer an automobile, comprising in combination with the drag link of the automobile, a shifting bar pivotally mounted on the frame, one end of which is slidingly engaged to the drag link, and carrying on the rear end thereof a boss revolubly mounted thereon adapted to enter into a groove in the periphery of a revoluble cylinder; a revoluble cylinder keyed to a gear shaft and having an annular groove therein, the said gear shaft being workably connected with the steering wheel.

876,070. Automobile. Walter W. Macfarren, Pittsburg, Pa., assignor to William H. Donner, Pittsburg, Pa. Filed July 23, 1906. Serial No. 327,328.

1. The combination with a vehicle, of steering mechanism comprising a substantially vertical sectional steering shaft, connection between each section of said shaft and a pair of wheels to steer the same, and a clutch mechanism adapted to connect the said shaft sections so that they will rotate either in the same or opposite directions.

876,104. Steering Knuckle for Automobiles. Hinsdale Smith, Springfield, Mass. Filed Feb. 13, 1907. Serial No. 357,179.

1. In a steering knuckle, the combination with the fixed axle and a stationary upright post at the end thereof, of a rotatable sleeve bearing a stub journal inclosing said post and having an integral cap covering the top thereof, said sleeve having a lateral axle receiving opening extending upward from its bottom, whereby the sleeve may be slipped down into position from the upper end of the spindle.

876,154. Shock Deadener for Vehicles. Gaston Dumond, Paris. France. Filed July 30, 1906. Serial No. 328,465.

A double acting shock absorber for vehicles comprising a closed cylinder containing a fluid and an arch-shaped piston of such diameter as to provide a space between it and the wall of the cylinder, thereby establishing communication between that portion of the cylinder above the piston and that portion below it, said piston further provided with a port, and a spring controlled double-acting valve mounted in said port, said port further establishing communication between that portion of the cylinder above the piston and that portion below it

876,168. Vehicle Wheel. Ira L. Goodrich, Curpertino. Cal. Filed Feb. 9, 1906. Serial No. 300,239.

1. In a wheel construction, the combination of a stationary axle, a sleeve rotatable thereon, a hollow hub having a limited radial movement relative to the sleeve, an annular air cushion between said sleeve and hub, fixed and movable annular flanges at the ends of the sleeve, said hub having annular ends opposing said flanges, said flanges each having an annular groove and a series of balls within said groove and engaging the contiguous surface of the annular end head of the hub, and annular packings between the end heads of the hub and the flanges, one of said packings being arranged outside of the series of balls and the other packing being arranged inside of the same series of balls whereby a dust-proof joint is formed.

876,210. Carburetter, John H. Miller, Bridgeport, Conn. Filed Aug. 6, 1906. Serial No. 329,373.

1. In a carburetter, the combination of an inlet for a hydrocarbon liquid, an air inlet for the purpose of bringing air into contact with said hydrocarbon liquid so as to form an explosive mivture, a movable baffle plate for partially obtsructing the flow of air through said air inlet, a lever supporting said baffle plate, a cylindrical member encircling said lever, and a lug of arcuate form mounted upon said cylindrical member and provided with a level face for controling quantitatively the degree of movement of said lever.

876,214. Vehicle Wheel. John H. Morris, Omaha, Neb. Filed June 15, 1906. Serial No. 321,864.

1. A vehicle wheel, comprising a tubular rim, a hub, a disc fixed thereto, hollow spokes fixed to the hub and disc, a pair of springs detachably fixed to the outer end of each spoke and being yieldingly attached to the hollow rim.

876,272. Means for Flexibly Connecting Parts of a Vehicle to a Frame. Edward J. Gulick, Mishawaka, Ind. Filed Feb. 21, 1907. Serial No. 358,712.

1. In combination with a frame member, and a supported member, of a socket on one of said members and a ball on the other member to constitute a ball and socket joint, a bolt extending through said members, and a spring surrounding the lower end of the shank of said bolt and secured beneath said frame member, whereby said frame and supported members are yieldingly secured together, substantially as described.

876,287. Carburetter. Morris L. Williams, Philadelphia, Pa. Filed Aug. 11, 1905. Serial No. 273,832.

1. A carburetter having a hydrocarbon passage, a valve for controlling said passage, a plurality of ducts into which said passage discharges, an air passage discharging through said ducts, and a valve for controlling said ducts and air passage.

876,351. Motor Wagon. August Hoedt, Peterawe, near Obersitzko, Germany. Filed April 5, 1907. Serial No. 366,481.

1. In a motor carriage the combination, an axle, a friction wheel, axle a friction disc in tangent with the said friction wheel, the axle which is connected with the said friction disc, the gearing running with the friction disc, the gearing running with the friction disc, the casing fixed to the gearing, the differential mechanism in the casing, two axles protruding from the said casing made movable and shiftable by the universal joints, and turnably arranged in the bearings, springs holding the said bearings and fastened on the axle, toothed wheels fixed at the ends of the said axles adapted to engage with the teeth of the respective wheels, the latter wheels being connected with the wheels. two hollow axles on the said axle having guiding ribs friction wheels having grooves engaging with the said ribs and adapted to be shifted by the sockets which are sliding on the bar having right and left screws, friction clutches at the utmost ends of the said hollow axles, a bar supported parallel to the axle, arms and rings on this bar, the rings of which are adapted to slide in a groove of the hollow axles which are fastened by screws on the axle and also adapted to be coupled with the said friction clutches, means enabling the coupling consisting of the springs fastened to the rings adapted to press the friction part 22 against said friction clutches, means for steering both the pair of wheels by turning the respective axles in the same, but opposite angles, substantially as shown and described.



\$375 and Upwards

The automobile for winter use. Air cooled —no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumptio. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Bex No. 250 AUBURN, IND.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.



STA-RITE PLUGS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE and see for yourself. Double or single Porcelain,—Mica or Magneto,—all kinds. All Good Dealers.

THE R. E. HARDY CO.,

85 Watts St., New York City

85 Watts St.,

ontinem Ready-Fiated Tires.

They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY 43 Warren Street. New York City.

"Keep your eye on Continentals"



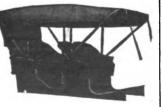
THE NDE IS RIGHT

outwear an auto and it will Send for Booklet

Index Speed Indicator Co. MINNBAPOLIS, MINN.



SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies SPRINGFIELD** METAL BODY CO., 366 Birnie Ave., Springfield, Mass.



A.O.SMITH CO.

High-Grade Axles



Pressed Steel Frames

Steering Columns

Transmissions Steel Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street.

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep-No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00.

J.CKSON AUTOMOBILE CO Jackson, Mich.



Fliminates Useless Experiments for "Talking Points" Studebaker Automobi'e Co., South Bend, Indiana

1-1111 ALUMINUM BODIES J. M. QUINBY & CO.

EST. 1834

Carriage Builders,

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

FRANKLIN Automobiles

The cost of a motor car is different from the price. Write for catalogue which ex-plains Franklin high-power at low cost. H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

mmeter \$6.00.

How Are Your Batteries? A CONNECTICUT VOLT AMMETER WILL TELL YOU

Guaranteed, and the price is right, send for catalogue and trade discounts.

CONNECTICUT TELEPHONE and ELECTRIC CO., Inc. Meriden, Conn.



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.
New York.

-SIMPLEX-

50-60 H. P. \$5,750 Equi Lic. Under Selden Pat. \$5,750 Equipped Guaranteed One Year Palmer & Singer Mfg. Co.

1620-22-24 Broadway, New York
1321 Michigan Avenue, Chicago, Ill.

\$250 "SUCCESS"

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature. tive literature.

Success Auto Buggy Mfg. Co., Inc. 531 Bo Balivere Ave., St. Louis, Mo

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY • 154 Nassau Street. New York

Enclosed find \$2.00 for which enter my subscription to

The Motor World

for on	e year,	commencing	with	the	izzue	of
Name						

Address

CIMIOTTI GARAGE

Now York City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try ns.

Tel. 2686 River.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed

WITHERREE IGNITER CO..

541 West 434 St., New York

Before You Buy a Car

telephone a Mitchell agent and tell him you want to be shown the "silent argument" the Mitchell offers in demonstration. He'll be glad to show you—call him up—it's worth money to you if you are thinking of buying an automobile. (No obligation.)

MITCHELL MOTOR CAR CO.,

220 Mitchell St., Racine, Wis.

HAYNES

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY KOKOMO, IND. Members A. L. A. M.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway—CHICAGO, 1702 Michigan Av.

Logan 1908 Model T One Ton Truck

A truck equipped with a four cylinder air cooled 20 H. P. motor, built for service and fitted to carry its load day in and day out under all conditions. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE, OHIO.

You Can Safely Rest Your Reputation CLEVELANO-CANTON SPRINGS They Will Uphold it Worthily CLEVELAND-CANTON SPRING CO., Canton, Ohio

THE BICYCLING WORLD and MOTORCYCLE REVIEW

Will Interest You. Published Every Saturday at

THE BICYCLING WORLD CO., 154 Nassau Street, New York City. \$2.00 per Year. Specimen Copies Gratis.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., / ndorsen, Ind.

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St.. Syracuse, N. Y.



For catalogues, address
THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

TRUFFAULT-HARTFORD

SHOCK ABSORBER
Mark

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.
Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO., E. V. Hartford, Pres. 66 Vestry St., New York

AJAX WRAPPED TIRES

Guaranteed for 5,000 Miles Riding

Write for copy of Guarantee

AJAX-GRIEB RUBBER CO.

General Office, 57th St. & Broadway, New York AGENTS IN ALL LARGE CITIES

LAVALETTE & CO.

80% of Magnetos used in 6-cylinder cars are

EISEMANN High-Tension MAGNETOS 112 West 42d Street, **NEW YORK**





MICHELIN TIRE CO..

Milltown, N. J.

Apperson Policy

"QUALITY NOT QUANTITY"

If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts

COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Cenn





EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St. and Broadway and 73d St.
CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.
POBES AUTO SUPPLY CO., Portland, Oregon.
POBES AUTO SUPPLY CO., Seattle, Washington.
WAITE AUTO SUPPLY CO., Providence, R. I.

FRANKLIN Automobiles

No wonder heavy automobiles are losing favor. The extra weight is no longer needed.

Excessive weight belongs to the early experimental days. There is no excuse for it in a modern built automobile. It is a defect and a drawback, and unreasonably expensive.

We recently weighed nine different makes of 5-passenger water-cooled automobiles. The average weight was a third more than that of the 5-passenger Franklin Type D.

None of these machines has more strength, or more carrying ability than Type D. But their extra weight required a third more power to do the work; 37 horse-power to do what Type D does with 28 horse-power.

Type D weighs only 2200 pounds; Type C Touring-car 1600 pounds; and Type H six-cylinder, 7-passenger touring car 2600 pounds. The average six-cylinder, 7-passenger automobile weighs about 4000 pounds. Think of the difference that makes in gasoline consumed and tires worn out.

The light-weight Franklins are economical; and they are easy to handle and comfortable. You get the full benefit of them.

Before buying any automobile see it weighed on the scales, with your own eyes; and compare it with a Franklin of similar passenger capacity.

The weight question is a vital one.

Write for the catalogue describing Franklin Models.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

Member Association Licensed Automobile Manufacturers.

GABRIEL AUTO ACCESSORIES



The Gabriel Exhaust Horn adds tone to the car in more ways than one. Their practical value for necessary warnings is greater than any other because

of their carrying power and the tone being musical warns without startling. Can be attached to any type of steam or gasoline cars or motor boats regardless of size or number of cylinders.

The principle on which Gabriel Shock Absorbers are built is the simplest of any made. They permit a free and natural play of the springs while riding over slight inequalities and by opposing friction in exact proportion to the heavier shocks or jolts prevent the springs from going too far up or down; stopping them gradually without shock.

Gabriel Shock Absorbers were used upon the Oldsmobile "MUDLARK" recently driven by Mr. Ralph Owen from New York City to New Orleans, who says of them: "On my last year's trip I broke sixteen springs. This year while I have driven over even worse roads. I have not broken a single spring. Before starting I had the car equipped with Gabriel Shock Absorbers and haven't had any trouble at all."

> The Gabriel Cut-Out by relieving the engine of back pressure caused by the muffler increases the working power available in hill climbing, speeding or on heavy roads.

> > If you will specify these Gabriel Auto Accessories for you 1908 Car, you will be sure to have the best.

Ask your dealer or write for booklet.

GABRIEL HORN MFG. CO., 1417 E. 40th St., Cleveland, O.



Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K-4-cyl., 4%x5 \$3500

Model R-6 cyl., 41/2 x 43/2 **\$4200**

Model N—4 cyl., 5x5 **\$3700**

Model T—6 cyl., 5x5 **\$5000**



Write for Particulars

National Motor Vehicle Company

1007 East 22d Street INDIANAPOLIS.



The Largest Automobile Supply House in America

The Miller Speedmeter

The Miller Speedmeter is the simplest and most compact, durable and accurate speedmeter on the market. It works on the principle of centrifugal force. The entire governor mechanism is constructed from tool steel. It is arranged for adjusting the tension of springs at all speeds, and with this special constructed governor and spring adjustment, the springs are made and adjusted to show all speeds with absolute accuracy.

Rate of Speed—We wish to call particular attention to the fact that the Miller Speedmeter will register correctly at a low rate of speed, and the hand does not bob around or fluctuate when running at slow speed.

Flexible Shaft—The flexible shaft used in this instrument is made from tool steel and each link hardened separately before assembling. The cost of this shaft is more than four times that of the wire shafts generally used.

Driving Gears—The Miller Speedmeter is fitted with crown gears with an universal attachment, which permits of the instruments being attached to any style of car on the market.

Distance Traveled—The Miller Speedmeter is fitted with an odometer, which registers the distance traveled in miles, and has total and trip dials. Finish—The material, workmanship and finish of the Miller Speedmeter is not excelled, if equalled, by any other speed indicator on the market. Each instrument is carefully tested on a special constructed testing machine before leaving the factory, and

Is Guaranteed for One Year.—The price of the Miller Speedmeter complete, including odometer, with dial registering 60 miles per hour, \$50.00.

AGENTS WANTED EVERYWHERE—We give a large discount to manufacturers, jobbers, agents and dealers in automobile supplies.,
Manufactured by the MILLER SPEEDMETER CO. (Incorporated),
15 Herman Street, Worcester, Mass.

CHAS. E. MILLER

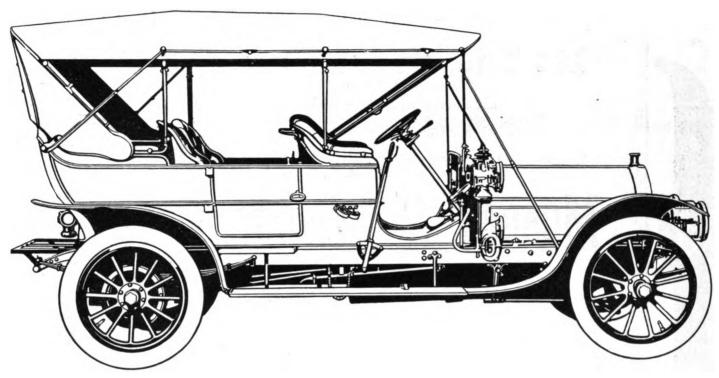
Manufacturer, Jobber, Exporter and Importer HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave.
Philadelphia, 318-320 N. Broad St.
Cleveland, Ohio, 1829 Euclind Ave.

Boston, Mass., 202-204 Columbus Ave.
Detroit, Mich., 2271/-229 Jefferson Av.
Buffalo, N. Y., 824 Main St.





The SIX-Cylinder GREAT ARROW in Theory and Practice

Some one has said that a theoretical man, if asked to draw an elephant, would evolve one from his own inner consciousness, while a practical man would go to a zoo and look at one.

In the same way it is possible for the man of a mechanical turn of mind to demonstrate to himself that six cylinders are better than four in producing an even running, silent and flexible car, but even that is not so convincing as actually riding in a six-cylinder car. No description of the effect of riding in the six-cylinder Great Arrow is so complete as that it is like coasting downhill with the motor stopped and the clutch throw out. IT IS GLIDING. You feel that the car is propelled by some irresistible force outside of it rather than by the machinery that is inside of it. This is the effect of the perfect balance of a six-cylinder engine as compared with a four. The Pierce Great Arrow for 1908 comes as near the poetry of motion as it seems possible for machinery to come.

```
4-cylinder Great Arrow, 30 H. P., Price, $4,000
                            4-cylinder Great Arrow, 40 H. P., Price, $5,000
   HERE ARE THE
1908 TOURING CARS 6-cylinder Great Arrow, 40 H. P., Price, $5,500 6-cylinder Great Arrow, 60 H. P., Price, $6,500
```

THE GEORGE N. PIERCE COMPANY.

(Members Association of Licensed)
Automobile Manufacturers

BUFFALO, N. Y.

PIERCE DEALERS

Boston, Mass. New York, N. Y. Chicago, Ill. Pittsburg, Pa. I hiladelphia, Pa. San Francisco, Cal. San Francisco, Cal. Portland, Ore. San Francisco, Ca Fortland, Ore. Scattle, Wash. Los Angeles, Cal. Faltimore, Md. Buffalo, N. Y. Cleveland, Ohio. Corning, N. Y. Davenport,, Iowa Denver, Colo. Detroit, Mich. Hartford, Conn. Houston, Texas. I ansas City, Mo. Louisville, Ky.

```
FIERCE I

I. W. Maguire Co.
Harrolds Motor Car Co.
H. Paulman & Co.
Eanker Brothers Co.
Foss-Hughes Motor Car Co.
The Geo. N. Pierce Co.
Covey & Wallace Motor Co.
Broadway Auto. Co., Inc.
William E. Bush.
S. uthern Auto. Co.
The Geo. N. Pierce Co.
Over of Wallace Motor Co.
Suthern Auto. Co.
The Geo. N. Pierce Co.
Metropolitan Motor Car Co.
Metropolitan Motor Car Co.
Iowa Auto & Tire Co.
Tom Botterill
J. P. Schneider
Miner Garage Co.
Houston Motor Car Co.
I'alace Auto. Co.
John Mason Strauss

Paris, France, N. S. Goodsill (parts of the control of the contr
                                                                                                                                                                                                                                                                                                                                                                                                            Paris, France, N. S. Goodsill (parts only), 22 Avenue de la Grand Armee.
```

Mexico City, Mexico Milwaukee, Wia. Minneapolia, Minn. Montreal, Can. Newark, N. J. Ottawa, Canada. Portland, Me. I'rovidence, R. I. Pochester, N. Y. Salt Lake City, Utah. Scranton, Pa. Springfield, Mass. St. Louis, Mo. Titusville, Pa. Toronto, Ont. Troy, N. Y. Binghamton, N. Y. Mobile, Ala. Omaha, Neb. Richmond, Va. nly), 22 Avenue de la (

Mobler & De Gress
American Auto. Co.
II. Paulman & Co.
Wilson Automobile Co.
Eilis Motor Car Co.
Wilson & Co.
Central Auto. Station Co.
F. A. Nickerson Co.
F. A. Nickerson Co.
Toss-Hughes Motor Car Co.
U. S. Auto. Co.
Tom Botterill Auto Co.
Standard Motor Car Co.
E. R. Clark Auto. Co.
Western Auto. Co.
U. Ambert & von Tacky
Auto. & Supply Co., Ltd.
Troy Auto. Exchange
Binghamton Motor Co.
So. Automobile Co.
H. E. Frederickson
B. A. Blenner
ad Armee.

la Independencia 12
187 Wisconsin Street
217 Fourth Street, South
117 Craig Street, West
222 Halsey Street
142 Bank Street
55 West Street
642 Congress Street
642 Congress Street
512 Industrial Trust Bldg
21 Phymouth Avenue
63 W. Third. South

461 Worthington Street 4701 Washington Blvd. 16 N. Franklin Street 24 Temperance Street 22 Fourth Street 172 State Street 105 S. Conception Street 2046-2048. Franklin Street 1607 West Broad Street



There is a growing disposition on the part of motorists and dealers to specify tire equipment on their cars. In other words, the man who pays the tire bills is coming to want his say as to the kind of tires he pays for. Our attention has been called to this matter particularly of late because of the large number of letters coming from dealers and owners in which the statement is made that

have been specified on car orders. Some of these parties-most of them, in fact-have used our tires before, but not a few of them are converts to good tires thru the excellent service given to some of their friends. A New York dealer says: "Have instructed the factory to equip cars with M. & W. tires always, unless otherwise instructed." It seems to be a case of "specifying what you want when you want it." GET THE HABIT.

MORGAN & WRIGHT, DETROIT

Branches, Agencies or Dealers Everywhere



Safe: The margin of safety is ample for all

emergencies.

The Garford chassis used, perhaps more than any other, represents the highest attainments of the orthodox art.

Three Gasoline Models: Two "30's" and a "40"

STUDEBAKER AUTOMOBILE Co., South Bend, Ind.

Member Association Licensed Automobile Manufacturers. General Office, Cleveland, Ohio.

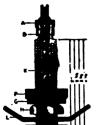
Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. The do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind.

ESTABLISHED 1844

SCHRADER UNIVERSAL Trade Mark Registered April 30, 1895



SIMPLE AND ABSOLUTELY AIR TIGHT

¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 21/2 inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturare

Manufactured by A. SOHRADER'S SON., Inc., 28-30-32 Rose St., New York

REO

Just Your Style

Whatever you want a motor car for—touring, speeding, climbing, or all-around everyday service—there's a REO just fitted for the work.



The REO Touring Car, \$1,250

A big, roomy, powerful car, quiet, smooth-running, and easy-riding. Carries five people over all sorts of roads wish a steady reliability that you can count on to the journey's end.

Handsome, stylish, thoroughly up to date. The winner of cups and trophies from cars of double and triple its price, in every sort of contest.

The REO Runabout, \$650

A handy, speedy, spunky little car for everyday use that carries four passengers. Back seat folds down and leaves plenty of carrying space. Wonderfully reliable and economical. Carried four people 682 miles for \$3.38 per passenger in the New York Motor Club's six-day economy test. Strong, able and stylish.

There are those who declare it is "too much for the money."





The REO Roadster, \$1,000

The car for speed. Actually goes 45 miles an hour. Carries two passengers, with a trunk box in the rear convertible into a seat for two more passengers.

Provided with ample carrying space. Its racy lines and beautiful finish combine to make it the "sportiest thing on wheels."

And every one of these REOS does the work of cars that cost twice the money to buy and to operate.

Write for the new REO catalogue that tells you why.

R. M. OWEN & CO., Lansing, Mich.
General Sales Agents for REO Motor Car Company

One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us — it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out — that

hurt the consumer, the dealer and ourselves. For the jobber knows no law.

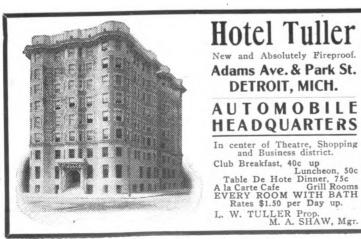
So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co.

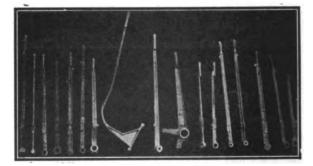
143 Wheeler Ave., Belott, Wis.







PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM CRAMP & SONS BHIP & ENGINE BUILDING COMPANY, - Philadelphia, Penna.

AUTOMOBILE BODIES



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9,000 jobs, complete, trimmed and finished

ACINE NOVELTY MFG. COMPANY, Racine, Wis.



OLAR Gas Generators

have the only perfect and scientific principle for the generation of Acetylene Gas.

Solar Generators are made from seamless drawn Brass Shells of heavy gauge.

This construction feature entirely overcomes the possibility of leakage, which is so apparent in models where

seams are soldered. They are easily charged and recharged and they employ the only practical and scientific principle for the generation of acetylene gas. Even when manufacturers equip with Lamps not of our manufacture-they use SOLAR GENERATORS.

Badger Brass Mfg. Co.

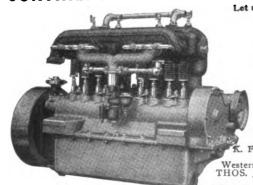
Two Factories

436 11th Ave., NEW YORK KENOSHA, WIS.





CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908 THREE SIZES

THREE SIZES

4½ in. x 4½ in.

4½ in. x 5 in.

5 in. x 5 in.

5 in. x 5 in.

4-cylinder with self-contained oiling system.

Motors are ready for coupling any standard magneto.

Our new factory and machinery enable us to guarantee quality and deliveries. Also clutches and transmissions. Send for catalogue.

transmissions. Send for catalogue.

K. FRANKLIN PETERSON.
166 Lake St., Chicago, Ill.
Western Representative
THOS. J. WETZEL,
29 W. 42d St., New York.
Eastern Representative.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.

The Car You Can Afford to Buy and Keep

is the Mitchell.

-Because it is moderate in price (\$1,000 to \$2,000).

-Just as stylish, handsome and well finished as any car.

-And is perfect in each detail of construction.

—Doing just as well on the road and standing up to wear and tear just as well as the extravavantly high-priced cars

Know this for yourself, Mr. Business Man.

Get demonstrations of the high-priced cars.

Then form your opinion in a demonstration of the Mitchell.

The Mitchell agent will be glad to take you out for 50 or 100 miles any day.

Call him up-you are placed under no obligation.

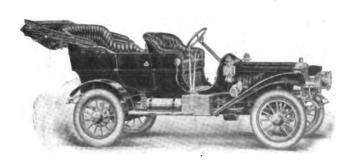
\$2000 Just say "Show me"

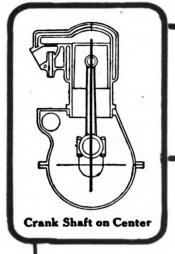
He'll answer with the car—show you a "silent argument" that will convince you.

Write for letters proving that the Mitchell is the most economical car to operate, and for catalog No. 18, picturing and describing the Mitchell Touring Car \$2,000, Limousine \$2,800, Roadster \$1,250 and Runabout \$1,000.

Touring Car shown here—5 passenger, 35 h. p., 4 cylinder, speed 50 miles, finished in Mitchell blue—a very neat and extremely desirable car from radiator to tail light.

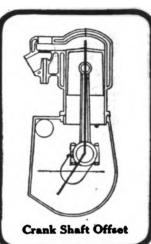
Mitchell Motor Car Co., 280 Mitchell St., Racine, Wis.





Rambler

Why the Offset Crank Shaft



One of the greatest improvements in motor construction is the offset crank shaft. Its advantages are positive and direct.

First—By practically eliminating the dead center the efficiency of the motor is greatly increased through the greater leverage and more direct thrust from piston to crank shaft.

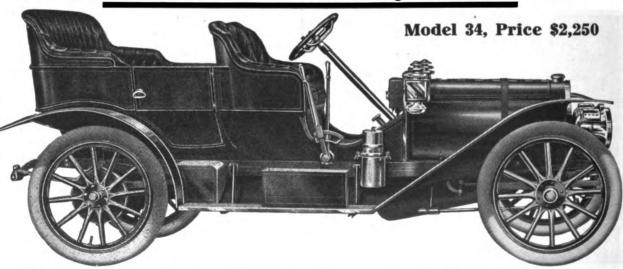
Second—Increased life of the motor through reduction of side thrust on cylinder walls and consequent saving in wear.

Third—Reduction in vibration and increased steadiness of running through more direct application of power generated in the cylinders.

Like many other fundamentally good features this must be done right and in the Rambler it is right both theoretically and practically and the result is a motor that combines the highest degree of efficieny with long life and economy of operation.

It is this and other features of equal value that make

The Car of Steady Service



This four cylinder chassis, equipped both as a 5-passenger touring car and 3-passenger roadster. Price of each style \$2,250. The Rambler Utility Car with double opposed motor, \$1,400.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

Branches and Distributing Agencies:

Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

Representatives in all leading cities.

Volume XVII.

New York, U. S. A., Thursday, March 12, 1908.

No. 24

DARRACO GOES ON THE ROCKS

Creditors of the Company Make Damaging Allegations Against It—Liabilities Reported to Aggregate \$100,000.

Closely following the failure of the Mercedes Import Co., another of the importing houses, the Darracq Motor Car Co., New York was petitioned into bankruptcy on Friday last, 6th inst. The petitioning creditors and the amounts of their claims are: Cole & Woop, \$68 repairs; Gotham Rubber Co., \$25 rubber coats, and Samuel H. Shaw, \$513 commissions on sales of automobiles. They alleged that the company is insolvent, had paid out money to several creditors on antecedent indebtedness, and made transfers of property, amounting to more tham \$2,000.

Judge Holt, of the United States District Court. appointed Lindsay Russell receiver, with a bond of \$50,000. It was stated in the application for the receiver that the company has automobiles on hand valued at \$75,000, separate parts and accessories, \$18,000; machinery, tools and fixtures worth several thousand dollars. It is said that business has been dull for some time past and the officers became tired of putting up any more money to carry on the business. The liabilities are reported to be \$100,000.

After the receiver was appointed, the attorney for E. Lamberjack & Co., the Michelin representatives, said that several days before he obtained a judgment against the Darracq company for \$2,088 for tires, and execution has since been issued to the sheriff. After the suit had been commenced the company produced a bill of sale of different cars to the New Amsterdam National Bank for \$1 and other consideration.

It is said that the bill of sale was filed on January 28 and covered 12 automobiles—ten in this city, one in Chicago, and one in bond. It is also reported that the company owes the New Amsterdam National Bank \$11,000. When a deputy sheriff made

a levy on the office furniture at 1989 Broadway, he found six automobiles there, which it is claimed are those included in the bill of sale to the New Amsterdam National Bank.

The Darracq company was incorporated under New York laws on January 12, 1906, capital stock \$100,000, which was reduced to \$50,000 on April 6, 1906, to take over the automobile branch of the business of F. A. La Roche & Co., and to handle a car formerly used by the American Darracq Automobile Co. G. M. McWilliams was president, C. D. Wilder, treasurer, and Ben Wood, secretary.

· Flanders Acquires Interest in Wayne.

W. E. Flanders and Thomas Walburn, respectively general factory manager and general superintendent of the Ford Motor Co., Detroit, have resigned those positions. Flanders has acquired an interest in the Wayne Automobile Co., also of DeDtroit, of which he has been made general manager, B. F. Everitt, who long had occupied that office, having been elected president. It is stated that fresh capital has been put into the Wayne company and that plans are afoot for the production of automobiles "on a scale heretofore unattempted."

Standard Welding to Make Midgley Rims.

On or about May 1st next, the Standard Welding Co., Cleveland, Ohio, will begin the manufacture of the well known Midgley rim, their ample facilities and long experience abundantly qualifying them for the work. The arrangement to that end has been made with the several constituent tire concerns of the Rubber Mfg. Co., viz.: the Hartford Rubber Works Co., Morgan & Wright and the G & J Tire Co.

Doherty Leaves Corbin for Cameron.

H. W. Doherty, formerly of the Corbin Motor Vehicle Corporation of New York, has been appointed sales manager of the Cameron Car Co. He will be located at the Beverly, Mass., factory, but will have direction of the Brockton product in addition to his duties in connection with sales.

HIGH FINANCE INVOLVES A MAKER

New York Car & Truck Co. Fails—Relation with Allen-Kingston Said Not to Affect that Company.

On Friday last, 6th inst., a petition in bankruptcy was filed here against the New York Car & Truck Co., manufacturers of railroad trucks and of the Allen-Kingston automobile at Kingston, N. Y., by these creditors: Harry J. Schnell, New York, \$61,500 for loans; Carl Coonley, Port Richmond, Staten Island, \$5,000 loans, and Colby N. Chester, Jr., New York, \$1,768 for merchandise.

It was alleged that the company is insolvent, made preferential payments of \$2,702 to twelve creditors, and admitted in writing inability to pay debts. The board of directors held a special meeting on March 4 and authorized the vice-president, Daniel G. Bogart, to admit inability to pay debts, and willingness to be adjudged bankrupt, as the company is hopelessly insolvent. Mr. Schnell holds ten notes of the company for his loans, and of these notes \$22,000 are now due. Judge Holt appointed Robert Wilkinson of Poughkeepsie, receiver and authorized him to continue the business for 20 days.

It was stated that the assets were about \$75,000, consisting of manufacturing plant, raw material, such as steel and iron, automobile chasses and parts, car trucks and parts, special tools and machinery and a few hundred dollars in bank. The company has eight or ten automobiles partly finished all of which, it is said, have been sold at good prices, when completed.

The company was incorporated under the New Jersey laws May 5, 1906, with capital stock \$2,500,000, but had no rating at Bradstreets. It succeeded to the business of the Peckham Mfg. Co., which was put into bankruptey on January 15, 1906. Orlando F. Thomas, one of the high financiers of the Morse-Heinze-Thomas group, whose

operations precipitated the recent panic was president of the New York Car & Truck Co.

The fact that the New York Car & Truck Co. performed the actual production of the Allen-Kingston automobiles, made it appear that the Allen-Kingston Motor Car Co., was affected or would become involved in the failure. Walter Allen, of the Allen-Kingston company, states, however, that this is not the case. He says that the latter concern paid for the labor, rent, etc, for producing their automobiles, and also advanced large sums of money to the embarrassed company, which loans are, however, secured by a bank's guarantee. Allen stated further that Orlando F. Thomas has no present connection with the Allen-Kingston company, which is contrary to the general impression that not only Orlando F., but E. Russell Thomas and others of their financial intimates were heavily interested in the concern.

E. V. Receivers' Report for February.

According to the report of the receivers, filed in court, the sales of the Electric Vehicle Co., Hartford, Conn., from February 1 to March 1, amounted to \$16.880.43; and the purchases to \$3,549.94. Cash on hand February 1 was \$21,951.44; collected on Electric Vehicle account, \$4,149.19; collected on receiver's account, \$15,765.36; collected on Selden royalty, \$1.335.74; total, \$43,-201.73. Disbursements were: Pay-roll, \$6,-677.89; Association Licensed Automobile Manufacturers, \$806.82; traveling expenses. \$196.12; insurance, \$1,022.12; appraisers' salaries, \$2,000; purchase creditors, \$1,534.93; petty expenditures, \$265.64; services of clerks, stenographers and office boys from December 1 to 10, 1907, \$641.31; total. \$13,-144.83; cash on hand, \$30,056.90.

Incorporates to Make Two Cycle Motors.

With \$50,000 capital stock, the International Motor Co. has been incorporated at Detroit to manufacture a two cycle motor designed by Philip S. Claus, formerly with the Northern Automobile Co., and later with the Cadillac Motor Car Co. The company has purchased the factory at 868-890 Military avenue, with a lot 150x300 feet and railroad siding, and a factory space of 20,000 square feet. Machinery is being installed and it is stated the company expects to employe about 75 men. The officers of the company are: President, X. B Konkel; vice-president and general manager, Philip S. Claus; treasurer, Alexander Lemke, and secretary, John Lesinski.

Diamond Branch in New Store.

The Diamond Rubber Co,'s Pittsburg branch heretofore located at 16 Wood street, has been removed to fine new store at 6122 Center street, East End., in the same city, of course. The new place was specially appointed for the Diamond company's occupancy, and contains all modern conveniences.

The Week's Incorporations.

Milwaukee Wis.—Commercial Auto Co., under Wisconsin laws, with \$15,000 capital. Corporators—Oscar Eskuche, Mitchell Mackie and H. W. Eskuche.

Milwaukee, Wis.—Power Vehicle Co., under Wisconsin laws, with \$25,000 capital. Corporators—George L. Stephenson, John H. Valentine and T. C. Clarke.

Detroit, Mich.—International Motor Co., under Michigan laws, with \$50,000 capital; to manufacture motors. Corporators—X. B. Konkel, Philip S. Claus, Alex Lemke and John Lesinski.

Atlanta, Ga.—Motor Omnibus Co., under Georgia laws, with \$40,000 capital; to operate motor stage line. Corporators—Herbert R. Brown, Macon and Judge S. S. Yodr, Washington, D. C.

Hoboken, N. J.—Mutual Taxicab Co., under New Jersey laws, with \$125,000 capital; to conduct a general electric cab service. Corporators—A. V. Jones, H. M. Browne, F. W. Mills, New York City, N. Y.

New York City, N. Y.—Knickerbocker Taxicab Co., under New York laws, with \$15,000 capital. Corporators—William B. Hurlburt and Sanford J. Wise, 1540 Broadway; Stuart H. Elliott, 1183 Broadway, New York City.

New York City, N. Y.—Belmont Garage, under New York laws, with \$4,400 capital. Corporators—William Hirsch, 115 East Eighty-third street; Julius Wolf and Irving Wolf, 1239 Madison avenue, New York City, N. Y., directors.

Philadelphia, Pa.—American Auto-Drive Co., under Pennsylvania laws, with \$10,000 capital; to manufacture automobile parts. Corporators—Walter O. Foss, George Link, Frederick C. Brunhouse, Philip C. Lang and Ralph E. Brunhouse.

Salt Lake City, Utah—Seeing Salt Lake City Cars & Automobiles, under Utah laws, with \$30,000 capital; to operate automobile line. Corporators—L. C. Mariger, president; L. S. Mariger, vice-president; M. E. Christopherson, secretary-treasurer.

New York City, N. Y.—Jones Taximeter Co., under New York laws, with \$10,000 capital. Corporators—Joseph W. Jones, Broadway and Seventy-sixth street: Raymond M. Owen, 1759 Broadway, New York City; Roy A. Rainey, Lakewood, N. J.

New York City, N. Y.—Metropolitan Taxicab & Auto Service Co., under New York laws, with \$160,000 capital; to deal in automobiles and to manufacture all vehicles. Corporators—J. W. Cummin, L. G. Hall, and E. True, all of New York City.

In the Retail World.

W. E. Rudy has disposed of his holdings in the Majestic Automobile Co., Lima, O. Lee Beeler has succeeded Rudy.

The Orlando F. Weber Co., one of the earliest and best known of Chicago's large

colony of dealers, is in the hands of a re-

II. B. Payne moved into his new Suburban Garage at 1624 Maple avenue, Evanston, Ill., this week. Storage, repairing and charging will be his specialty.

The Evanston Auto Co.. Evanston, Ill., is located at 1024, 1026 and 1028 Davis street. A complete electric charging station is a feature of the new, commodious brick garage.

Monterey, Mexico, is to have a garage, although the exact location has not been chosen. Juan Forseck and John Austin will finance the venture. The Reo will be handled.

The Sears-Nattinger Automobile Co.. Des Moines, Iowa, which occupied the premises at 812-814 Walnut street, has moved into its new garage at Tenth and Locust streets.

Fire from an unknown cause destroyed two cars in the garage of the George Abel Electric Transfer Co., Seventh avenue and Thirty-seventh street, New York City, Friday last, 6th inst. The loss is estimated at \$6,200.

Robert Brunson is remodeling the old two story building at Milwaukee and River streets, Elgin, Ill., for use as an automobile garage. Following its completion he will move from his present location at 381 Spring street.

The Hayes Rubber Co. is the style of a new concern which has commenced business at 57 Warren street, New York. In addition to tires, it will handle a full line of automobile accessories. The head of the concern is F. P. Hayes, formerly secretary of the Pennsylvania Rubber Co. of New York.

Rubay Fails After Selling Boston Branch.

Peter Zucker was yesterday appointed receiver for Leon Rubay, Inc., New York, who dealt chiefly with imported accessories. The petitioning creditors alleged that the corporation was insolvent and had admitted in writing its inability to pay its debts. Its assets are placed at \$4,000. Previous to the failure, the Rubay branch in Boston, had been taken over by the Percy Ford Co., a \$1.000 company formed for the purpose under New York laws. Ford himself already was connected with the Rubay establishment.

No New Manager Yet for A. L. A. M.

The meeting of the executive committee of the Association of Licensed Automobile Manufacturers, held in New York yesterday, adjourned without result. No successor for General Manager Budlong's office was chosen. It was known several weeks ago that the position was tendered Col. George Pope, of the Pope Mfg. Co., but Col. Pope has no desire to remove from Hartford, and therefore respectfully declined the offer.



IMPORTANT PARTS STANDARDIZED

A. L. A. M. Adopts Uniform Sizes for Rods, Yoke Ends and Levers—Lucke Throws Light on Alcohol.

The meeting of the Mechanical Branch of the Association of Licensed Automobile Manufacturers, held in New York on Tuesday last, 10th inst., was one of the most interesting meetings of the Branch held since its organization. It being the first meeting held this year, many subjects, which special committees have been at work on, were reported and papers read. Incidentally, the annual election was held, all of the incumbent officials being unanimously chosen to succeed themselves, as follows: Chairman, A. L. Riker, Locomobile; secretary, C. F. Clarkson; metallurgist, Henry Souther; chairman test committee, H. E. Coffin, Thomas-Detroit.

A special committee appointed to work with the test committee toward the standardization of rod and yoke ends, made an elaborate report on what it considered the proper sizes for the standardization of these important parts of construction. Standards of 3/8, 5-16, 1/2 and 7-16 rods were adopted and will be known as the A. L. A. M. standard adjustable rod and yoke ends. Nearly every manufacturer of American automobiles, is, at the present time, using various sizes of rods and yoke ends and it was found that owing to the various sizes used, that there was considerable confusion in getting the proper sizes for immediate delivery. With the adoption of this standard, the manufacturers of rods and yoke ends will carry in stock a full line of the standards adopted so that users of the sizes which have been adopted may be able to buy in the open market such sizes necessary. This is of particular benefit to the user as the parts will be interchangeable, and the rods of one car will serve equally as well for another.

Another important standardization was that of levers. Various weights and sizes of levers have been used with a considerable expense to those automobile manufacturers who do not have drop forging plants. Owing to their inability to buy stock levers, they must necessarily buy the dies from which these forgings were made and with the changing of the type or weight of the lever, new dies, at an increased expense, are necessary. After careful consideration the Branch adopted a uniform modified I beam lever, which the drop forge makers will carry in stock, making these levers interchangeable.

The committee appointed to report on the standardization of rims felt that the time was not ripe for a universal adoption of the standard rim, owing to the fact that it was impossible to tell whether the clincher or demountable rim would be in vogue. The

use of spare wheels instead of demountable rims was given consideration and the Rim committee empowered to make further investigation on this matter:

At the afternoon session, Dr. Charles Edward Lucke of Columbia University, who has been making some very exhaustive tests with alcohol, as a fuel for internal combustion engines, delivered an address to the Branch. Dr. Lucke's remarks were principally in making comparisons in the tests he had made with the use of alcohol for gas engines for locomotion as compared to those for stationary use. He pointed out clearly to the Branch that with certain types of engines he could start with alcohol as easily as gasolene, by the use of a spray carburetter with the ordinary needle valve. He said that he did not feel that the time was opportune for a universal adoption of alcohol for practical use, especially in automobile engines, owing to the absolute necessity for a minute adjustment of carburetter and ignition which could not be had in automobiles, owing to the inexperience of many drivers and owners. The vagaries of alcohol as a fuel was clearly pointed out by Dr. Lucke, who explained that during his experiments conditions arose and developed to an amusing standpoint. One incident noted was that in his tests on a two-cylinder motor with crank case compression, he found that the excess vapor which had not exploded with the first charge on the in-take, escaped through the crank shaft and could be ignited. In many instances the vapor could be ignited at the exhaust. In nearly all his tests, however, a good consumption had been attained and the standard of thermal efficiency of the motor maintained

E. R. Hewitt who has been experimenting with alcohol for commercial purposes gave some interesting data on the results of his work. Mr. Hewitt adapted an engine to the use of alcohol for a five ton truck. On gasolene with a full load, 41/2 miles on a gallon of gasolene could be had. On using the motor without readjustment, only over two miles per gallon of alcohol could be gotten, but on raising the compression from 75 to 120 pounds, he was able to get over five miles to the gallon of alcohol. He pointed out that it was necessary in this case to place the carburetter as near the engine as possible in order that the mixture would be sent into the cylinder not less than 72 degrees. In cold weather he was able to overcome the loss in the vaporization by surrounding the intake pipes with the water jackets which kept an even temperature for the vapor until discharged into the cylinder. It was the consensus of opinion that for commercial work, alcohol in the near future would be the most economical fuel to be used.

An interesting lecture on the use of pyrometers for indicating and recording the heat temperature in treating steels was delivered by W. H. Bristol and Charles Engelhard.

BUFFALO'S BIGGEST AND BEST SHOW

Opening Attended by Crowd of Five Thousand—More than 150 Cars Staged Under Brilliant Canopy.

With a blare of welcome sounded by approximately 200 horns of as many degrees of power and tone, the siren chorus was the opening signal of the sixth annual show of the Automobile Club of Buffalo, in Convention Hall, that city, on Monday night, 9th inst. A crowd of about 5,000 persons crowded the hall on opening night.

The show is undoubtedly more impressive than any of the five exhibitions that preceded it. Upwards of 150 cars, representing the standard makes, were staged under a canopy of blue and white bunting studded with thousands of white and colored incan descent lights, and fringed at the sides with a gold border and stars. Of the many exhibitors there are only three car manufacturers, these naturally being the big Buffalo concerns—the George N. Pierce Co., the E. R. Thomas Motor Co., and the Babcock Electric Carriage Co. The other exhibitors are local and branch agencies.

A new experiment is being tried this year with success. It consists of dividing the hall by four aisles, six feet each in width, instead of two aisles as formerly. This relieves the congestion to a noticeable extent and doubtless will make itself very necessary to-night (Thursday), when the largest crowd of the week is expected to attend. It will be known as "Boulevard night," when \$1 will be charged every person who enters the hall, the entire proceeds to be devoted to the fund that is being raised to construct the boulevard from Buffalo to Niagara Falls.

Among the exhibitors are the following: Maxwell-Briscoe-Buffalo Co., Maxwell and Mora; George N. Pierce Co., Pierce Great Arrow; E. R. Thomas Motor Co., Thomas; Walter Hayes, Locomobile; Lewis & Linn, American; F. F. Rick & Co., R-S motorcycles; Meyer Carriage Co., Firestone Motor Buggy; Jaynes Auto Supply Co.; Neal, Clarke & Neal, Indian; N. S. U. and Racycle motorcycles; J. A. Cramer, Stoddard-Dayton and Mitchell; Centaur Motor Co., Cadillac, Oldsmobile, Peerless and Rapid; Co-operative Motor Co., Stevens-Duryea, Corbin and Lozier; Babcock Electric Carriage Co., Babcock; Louis Engle. Jr., Cartercar; E. E. Denniston, bodies and tops; O. L. Gooden Motor Car Co., Winton; Poppenberg Motor Car Co., Reo, Rambler and Premier; Empire State Tire Co.; Brunn's Carriage Manufactory, Pennsylvania and Pope-Waverly; Buffilo Automobile Exchange, Franklin; Diamond Rubber Co.

The trustee of the St. Louis Motor Car Co., Peoria, Ill., has declared a creditors' dividend of 15 per cent.



An Unusual Proposition

ARE YOU AUTOMOBILE **DEALERS MAKING MONEY?**

If not, why not? Is it because your apparent profit is wiped out by after-sale contingencies? Is it because your business system, is faulty, your methods disorderly and careless? Is it because you are located in a district where the line of cars you sell is not adapted or in demand? Is it because you are a skimmer, not doing the business seriously, as though you had no real place in business life? Is it because you consider the selling of automobiles a game rather than a business.

The fact that so large a number of retail automobile dealers are not making money, and I am happy to say that there are few Maxwell dealers among this class, is a matter of serious concern to those in the industry.

Now, you know me; you know that I must have a good deal of experience, that my plan of covering territory has been successful; that I know the business end of the automobile business; that my plans carry.

Now I have, like our friend from Boston, a remedy. Ha, ha, you say to yourself. pretty cute. He means to tell us to sell Maxwell Cars. Yes, that's part of it, but not the only part. I have deeper reasons.

To accomplish, I want first to get into communication with you, to become better acquainted. Let me send you The Co-Operator, our own automobile paper, free for three months. I will lead up to my plan in it. It will be a valuable educator, and in due course I will give you the complete details of my remedy.

Of course, The Co-Operator says a good deal about Maxwell Cars, but it has another mission to you. It will lead to a better understanding between us, so that later I can make you a lot of money.

Apropos of Maxwell dealers making money, it is because Maxwell Cars, while not yet absolutely perfect, are the nearest perfect, and because of their correct mechanical principles; unit construction; three-point suspension; natural water cooling; multiple-disc clutch; metal bodies; and all the other distinctive Maxwell features produce satisfied users, and every user becomes a salesman and a booster. Will you please cut out the blank below and send in at once? Let us begin the good work now.



Maxwell-Briscoe Motor Company

Members A. M. C. M. A. P. O. Box 106

Tarrytown, New York

FACTORIES:

TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, A. I.

MAXWELL-BRISCOE MOTOR COMPANY, Co-Operator Dept. Tarrytown, N. Y.

Gentlemen:-Enter my name on free dealers' mailing list of The

Notice—This in no way carries with it the sligatest obligation, but I do it simply because Briscoe asks it and I want to be a good fellow.

THE **INCOMPARABLE**

THE CAR FOR SERVICE



The Touring Supremacy of The White

After a brief experience with the White, the average owner has gained such confidence in its supreme reliability and its ability to traverse any sort of road, that he plans his tours without any thought as to whether the roads are good, bad or indifferent. He knows that his tires will last much longer than on any other car of similar size or power. He is independent of everything except an occasional source of gasoline supply.

As an indication of the ceaseless touring activities of White owners, it is significant that. in many remote regions of this country and of foreign lands, the people think that all automobiles are propelled by steam power. conclusion is a natural result of their having seen no other automobiles but White Steamers.

The White Route Books, which give detailed road directions for important touring routes, will be mailed free on request.

THE WHITE COMPANY **CLEVELAND, OHIO**

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Philadelphia, 629-33 N. Broad St.

Boston, 320 Newbury St. Chicago, 240 Michigan Ave. Cleveland, 407 Rockwell Ave.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New fork City, and its branches.

23 Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should
Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MARCH 12, 1908

Condition of the Used Car Market.

Persistent rumors to the effect that former motorists who were hard hit, have been forced to dispose of their cars, or at least to offer them for sale at "panic prices," have given rise to the impression that the second-hand automobile market is glutted, that prices are down to the verge of nothing, and that there is absolutely no chance of disposing of a really good car at anything like a rational figure. Apparently this idea is more or less a part of the froth left by the ebb tide of financial depression, and like all froth, more or less unsubstantial.

Whatever may be the condition of the second-hand business in regard to stock on hand, it is a fact that prices asked have suffered little or no shrinkage since last fall, and that in so far as it is possible to co-relate prices and values in used machines, it is about as difficult to obtain a second-hand "bargain" as ever it was. While there

may be, and doubtless are, many cars, the owners of which would like to dispose of them at substantial rates, and while shrewd buyers are making the most of the situation to drive sharp bargains, there is none of the raffling off at nominal sums, which might be supposed, judging by newspaper reports. The generally expected tise in price indicative of the coming, spring has not yet materialized, but there is no indication of an existing or probable slaughter, to cut into retail sales, or in any way diminish the value of automobiles as merchantable wares.

How Reputations are Hurt.

When a manufacturer has built up a reputation, naturally he is proud of it. Thereafter, if he is of the right sort, his greatest jealousy is to maintain it. Usually, the maintenance is more difficult than the acquirement of the reputation. For it is an axiom that success breeds imitation and though imitation may be the sincerest flattery, rarely is it relished and rarely does it serve the purpose of maintaining the proud repute of any article. Usually the chief virtue of the imitation is its price. It sells for less than the original and genuine article and because of the fact, it appeals to a very numerous class.

How greatly such manufacturing malpractice has served to injure the legitimate automobile interests is almost beyond speculation. These interests are so manifold and the satisfaction of automobile users rests in so many small things, that the wonder is that the imitators of well known accessories or of parts thereof have not worked more injury than has proven the case.

When a car or some part of its equipment requires repair or replacement is the time when the groundwork for such injury. which is another term for dissatisfaction, is laid, often unthinkingly laid. Too often the owner is intent on counting the cost; as often, the dealer or repairman is as intent on earning the handsomest possible profit. As a result; for the particular part of the equipment requiring replacement. and which always had served well, there is substituted something of slightly lessened cost. If trouble ensues, it is not always the case that the blame is placed where it rightly belongs. The entire structure may be damned and the reputation of its maker or of the maker of the particular apparatus which is charged with fault may suffer.

How true is this assertion, is well in-

stanced by the case of a well known manufacturer of ignition apparatus. For months he had been receiving complaints of the faulty service of his product. He knew that the material and workmanship had been maintained at the same high standard that was responsible for the popularity of his output, and he was at a loss to determine the reason and cause of the very general damnation which was being visited on his goods. A searching investigation was the result, which disclosed that one of the smaller, yet most vital, parts of the whole, was being replaced, when it had been worn out from actual service, by a cheap substitute, improperly constructed, that was manufactured by a comparatively unknown firm. That the intent was to defraud, was evident from the fact that the cheap substitute was made to resemble the original in size and design, and so closely was the genuine copied that it was not detected by the manufacturer or his experts until an analysis of its component parts revealed the substitution.

Obviously this sort of thing works injury and annoyance to the manufacturer who must bear the brunt of the condemnation, and to the user of the device who fails to obtain satisfactory results, yet the latter is the real cause of the trouble, for by his policy of "penny wise, pound foolish," he makes possible the existence of individuals who live by preying on that portion of the community who strive to get something for little or nothing.

Mica Spark Plugs and Porcelain.

With the same determination to maintain their contention, that always is found when the advocates of an air cooled engine hear that type condemned by the water cooled votaries, the users of porcelain spark plugs are ever ready to assail the mica plug, and the enthusiasts of the latter type are equally willing to pick up the gauntlet; if indeed, they had not already thrown it down.

On the plug question, the users of the internal combustion engine have taken very determined stands. The contention is frequently advocated by those who use only the porcelain insulated plug that this type is far superior because of the facility with which the core may be made absolutely leak proof; and strangely enough the men who swear by the mica plug advocate the same argument in support of their claim that mica plugs give more satisfactory results than any other.



Another point advanced in substantiation of the claims for the mica plug is that the core will not break; the retort is that if the porcelain is destroyed another can be immediately substituted in the old base, which may be used indefinitely; the substitution being possible if a spare porcelain is at hand; the "if" is important and probably has had much to do with the case. And so it goes on, each using the arguments of the other to support his claim.

Again, the theory has been advanced that in the high compression engine the intense heat generated in the cylinders will cause the porcelain insulation to crack; if this is true, then experience and a matter of economy prompts the use of mica, which is not affected by the heat. But on the other hand, the contention that the mica plug absorbs oil, which turning to carbon, short circuits the plug rendering it useless, argues that the cheaper of the two would be the porcelain, providing it has sufficient merit to justify its manufacture. But in justice to the mica type, it must be said that actual instances of this shortcoming are few and far between.

Pertinent to the discussion, however, is the fact that while porcelain plugs retain favor for automobile use, they now are rarely to be found in motorcycles; for the latter, the mica plug is well nigh universal.

However, as Sheridan says: "The quarrel is a very pretty quarrel as it stands; we should only spoil it by trying to explain it."

What right have the police to interfere with the success of garage-keeping? Why, a horde of blue coats actually swept down on a New Jersey garage and gathered in a collection of hard-working chauffeurs deeply busied in the ennobling occupation of "shooting craps," and an unfeeling judge fined the "shooters" \$10 each. That sort of thing will not add to the popularity of any garage. The owner owes better protection to his hard working patrons and they should demand it!

Prepare for the millenium! A New York policeman actually has arrested a city official for violating the speed law. The policeman's name is Casey. It should be engraved in the policemen's hall of fame. It suggests that some day one of them may go so far as to arrest the grossest and most reckless of all speed violators—the delivery drivers for the newspapers, the editors of which forever are damning automobiles for the same offense.

MAKING WAR ON NON-SKID CHAINS

Officialdom in Several Cities Following New York Park Board's Lead—The Two Sides of the Question.

Official objection to the use of non-skid chains on the wheels of automobiles has cropped out in other cities than New York, where they first were excluded from the park roads and parkways.

"Let them keep the automobiles indoors when it is wet and icy," is the sentiment ascribed John Minwegen, vice-president of the board of local improvement in Chicago. Minwegen regards the use of chains on the wheels as a factor in the destruction of pavements that it is only fair to the tax pavers to eliminate.

The commissioners of Fairmont Park, Philadelphia, have been receiving such reports of damage done to the park driveways by tire chains that a rule prohibiting their use is under consideration. Before adopting such a rule, however, they were willing to hear objections and on Thursday, 5th inst., they heard counsel for the Automobile Club of Philadelphia. the Automobile Club of Germantown and the Quaker City Motor Club. S. Boyer Davis spoke for the two organizations first named. G. D. Bartlett appearing for the other. Mr. Davis expressed the opinion that the reports made to the commissioners had been greatly exaggerated, and in concluding his argument he said: "It is my belief that the greatly increased traffic of all kinds in recent years has had more to do with the wearing out of the roads than have the chains. The tendency of the automobile is to roll the surface of the roads rather than to tear it up, and except when rounding a curve at high speed, or when coming to a sudden stop by the quick application of the brakes, there is no scraping motion beneath the wheels. Automobiles seldom stop in the park and the curves are usually taken at reduced speed, and therefore, in justice to both automobilists and the public. I, on behalf of the two motor clubs, would ask the committee to consider fully the dangers to be encountered from driving a motor car on a slippery street without some provision against skidding before a final decision in the matter is reached." Mr. Bartlett's argument was along similar lines and the commissioners appeared to be favorably impressed by what was said.

The chain question was discussed at the monthly meeting of the park board of Baltimore early in March and John S. Gittings, who declared in favor of excluding tire chains from the parks, did so on the ground that "the automobilists who use chains in driving through the parks are causing immense damage to the roads." He backed up his position by referring to the action

COMING EVENTS

March 7-14, Boston, Mass.—Boston Automobile Dealers' Association's annual show in Mechanics Building and Horticultural Hall.

March 9-14, Buffalo, N. Y.—Automobile Club of Buffalo's sixth annual show in Convention Hall.

March 15-April 1, Omaha, Neb.—Omaha Automobile Dealers' Association's annual show in the Auditorium.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

March 18-24, New Haven, Conn.—New Haven Automobile Dealers' Association's show in Music Hall.

March 18-25, Rochester, N. Y.—Rochester Automobile Club's show in new Convention hall.

March 23-28, Indianapolis, Ind.—Indianapolis Automobile Dealers' Association's show week.

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

April 6, 7 and 8, Denver, Col.—Annual show in Mammoth skating rink.

April 6-11, New York City—New York Automobile Trade Association's carnival week

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

May 5-6, Harrisburg. Pa.—Motor Club of Harrisburg's second annual endurance run.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

of the park authorities in New York. General A. E. Booth defended the use of chains in bad weather on the ground of safety, but at the same time he suggested an extra tax on automobilists to pay for repairing the roads.

Norristown to Hold Endurance Run.

The Norristown (Pa.) Automobile Club will hold its first endurance run on Tuesday, April 28th. The course will be from Norristown to Reading and thence to Lancaster and return. The rules are similar to those used in other endurance runs and provide for controls, involuntary stops of the motor, and for repairs to mechanism.

Kalamazoo Motorists Get Together.

Kalamazoo. Mich., now has an automobile club. organization of the Kalamazoo Automobile Club having been effected last week when 40 charter members elected these officers: President, James C. Hatfield; vice-president, Anthony S.Hill; secretary-treasurer, Donald C. Boudeman.

BOSTON'S JAPANNED SHOW PROVES OF REAL IMPORTANCE

Decorations Distinctive and the Early National Shows Give Big Makers Time to Produce New Models—Surprising Number of New Cars in Evidence and a Wealth of Novel Accessories, Not to Mention the Candy and the Lemonade.

Japan is quite a few miles from the United States, and its connection with automobiles is exceedingly remote, but as applied by the Bostonese, a Japanese setting for an automobile show in the United States is not half-bad.

The fact was made evident when the Boston show in Mechanics building was opened on Saturday evening last, 7th inst. The Japanese archway—firecracker red in color—at the entrance, was not put into place until Monday, but within the Oriental trappings all had been hung. White and firecracker red constitute the color scheme. The first glimpse of it is had from beneath a long bower of purplish wisteria, which, hung here and there with Japanese lanterns, is in itself a pleasing picture. On either side of the bower, exhibits are located with backgrounds of red and

plays as also does the women's orchestra the leader garbed in crimson, the players arrayed in white.

In the heart of Yankeedom, where thrift and ingenuity go hand in hand, it is not strange that Manager Campbell and his Bostonese aides have on the occasion of this show, as on previous occasions, demonstrated that while other promoters have

spent many thousands for the same purpose, they have been able to obtain original and distinctive effects at much less than half the usual cost. For while it is plain that the Japanese setting was not unduly expensive, there is no denying that it is not only original and distinctive, but effective. bery of a deeper green, while in the very center of the hall, a giant palm uprears it-

self. From the greenery at its base, the fountain—yes, it must be a fountain—plays—plays eight or ten thread-like streams suggestive of boys' squirt guns, or a needle bath.

The background of the stage
is a painting representing a Japanese landscape,
with the snow
capped sacred
mountain in perspective. At the
sides of the stage
is a bare suggestion of pagodas,



MECHANICS BUILDING, WHERE THE BOSTON SHOW IS IN PROGRESS

white. Walls and posts are hidden by bunting of those hues, relieved occasionally by the flaming red sun of Japan or some other fanciful Oriental design. "Wisteria Walk" is situated in what is termed Exhibition Hall, in other parts of which there are other and smaller bowers, but hung not with the purple flower, but with wisteria in whites, pinks, and yellows. All walks, however, lead to Grand Hall, wherein the "air" of old Japan is strongest and wherein the fountain—aye! and such a fountain—

Grand Hall is a semi-riot of white and fiery red, but withal it is not disturbing riotness. The ceiling is hidden by narrow drapings of white and red bunting, pinned in a common center by a huge gilded crysanthemum, or what is supposed to represent a chrysanthemum. Red festooned on white adorns the balconies, and over each exhibit is a Japanese arch of the same red, within which the sign, in white, is suspended. Each space, carpeted in sage green, is hedged from its neighbor by boxed shrub-

and a touch of wisteria. The arches of the stage hold two gigantic painted dragons, each of which apparently is pursuing a Japanese lady angel, who in turn seems to be fleeing for escape to a fiery Japanese sun.

Above the gallery opposite the stage and on which the women's orchestra makes music, George Washington, done in oil—one of the stock properties of Mechanics building-peacefully looks down on the scene from his gilded frame. Several American flags also serve to recall that Boston still is in

the United States. There is white and firecracker red adorning the spaces on the galleries, and some more of it hiding the pillars in the basement. It is a pleasing combination throughout and one that promotes a cheerful glow.

It goes without saying that there was a "bumper house" on opening night. For if there is anything that the average Bostonese loves better than beans and brown bread, it is that magical piece of cardboard termed a pass. The promoters of the show evidently are aware of the fact and they tickle the popular liking by distributing first night passes with a lavish hand. As a result, the building always is jammed in less than half an hour after its doors are thrown open. Last Saturday night was no exception to the rule. Breathing space was almost at a premium and the character of the crowd suggested that more than the usual number of "complimentaries" had fallen into the hands of young men and young women who measure ribbon and dispense bargains in lingerie, the while tapping pencils on counters and crying "Cash!" The small boys who respond to the cry also were unduly numerous. They helped great to swell the recipts of the candy stands and of the purveyors of root beer and orangeade-which "exhibits" long have been a feature of Boston shows.

The Boston public enjoys its show. The proportion of probable buyers may be small but it does not prevent the young and the old from taking real interest in the cars and the accessories and in gathering in force and looking curiously into the bowels of a car and listening intently to any salesman who may undertake to satisfy anyone's desire to learn what's what. They are great collectors of catalogs and souvenirs, too; and they love to sit long and listen to the music of the band. Even when the automatic piano unlimbers and the attendants who are intent on selling sheet music lift up their voices to prove the quality of their wares, they receive their full need of admiring attention.

Boston enterprise also contributed something of a surprise to all of the exhibitors. Early Monday morning each of them received in a plain envelope addressed in feminine handwriting and marked "Personal." When it was opened, a card, typographically in good taste, was disclosed informing the recipient that Miss —— was prepared to perform expert manicuring at her establishment either morning or evening or at her patrons' home, when it was so desired. It was observable that not all of those who received the cards threw them away.

Manager Campbell also had some of the trade visitors guessing for a while. Their admission buttons are in the form of a small silver fish designed to be worn in the coat lapel. What connection there is between fish and motor cars was a source of much speculation, which found vent in suggestions that a "fishing excursion" was on, that some one would "get the hook" and

so forth and so on. It required a native Bostonese to set the unthinking strangers right: Boston is the home of the sacred codfish; hence the button.

But despite the candy and lemonade

But despite the candy and	- lemonade
CENSUS OF THE SH	ow.
Pleasure Vehicle	e s .
Gasolene: One cylinder	5
One cylinder	28
Three cylinder	3 136
Six cylinder	30
Total Gasolene Pleasure Water cooled Air Cooled	202 183 19
Four cycle Two cycle	202 195 7
	202
Steam Electric	
Total Pleasure Vehicles Touring cars	101
Runabouts	90
Buggies	5 .
	231
Chassis: Gasolene:	
Two cylinder	6 28
Two cylinder Four cylinder Six cylinder	10
Total Pleasure Chassis	
Cycles.	
Motorcycles Bicycles	
Total Cycles	4 6
Commercial Vehic	
Trucks	7 5
Buses, Stages, etc	4
Total Commercial Vehicles .	16
Gasolene: Two cylinder Four cylinder	10
Four cylinder	3
Total Gasolene Commercial	
Water cooled	8 5
•	13
Steam	1
Electric	
	3
Total Commercial Vehicles. Chassis	16 2
Total Commercial	18
Recapitulation.	
Total Gasolene Vehicles Total Steam Vehicles	21
Total Electric Vehicles Total Cycles	11
-	
Total all Vehicles	

stands and the automatic piano and other catchpenny devices, which subtract a trifle from its character as an industrial display, the Boston show is a fine, large, impressive show.

Practically all the well known makers are represented. Such names as White, Winton, Northern, Great Arrow, Royal and Corbin, are prominently displayed in Grand hall, as are those of Stoddard-Dayton, Apperson and Berliet, Stevens-Duryea and Stearns. Mitchell, Pope and Elmore are hardly less prominent. In exhibition hall, and side by side, are the Marmon and Franklin exhibits, with Rambler, Cadillac, Packard, Locomobile, Thomas and Matheson cars, close at hand. There, too, are the National, Reo, and Rainier displays, none the less prominent through being catalogued under agent's names, while Oakland and Brush, go well in the same vicinity, flanked by Studebaker and Premier cars, with the extensive Maxwell line displayed to advantage down by the outer entrance. Among the basement exhibits are to be found the Frayer-Miller trucks, as well as a White car, equipped with a special ambulance body, the Knox, Waltham and Studebaker commercial vehicles.

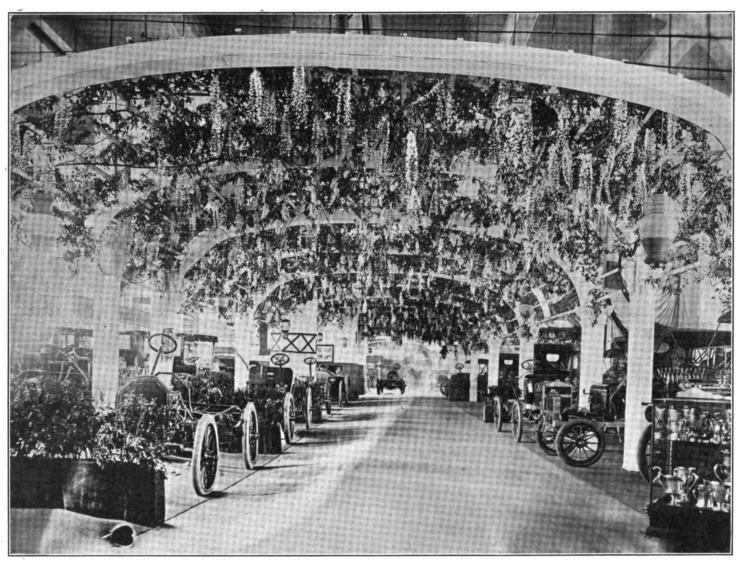
Rather surprising in a show coming so late, is the staging of several new models by makers well known and thoroughly exploited at former exhibitions of a like character. Prominent among these is the new Locomobile "40 Runabout," which has not been introduced publicly before, and which is a low-hung, modish affair, built on clean cut, distinctive lines which, though in many ways a departure from former Locomobile practice, yet retain sufficient stability to make it a worthy member of that respected and much prized line. Mechanically it is merely a new version of the model "I" 40, which already had been shown. That is to say, it is driven by a 5 by 6-inch, four cylinder motor, has make and break ignition, with low tension magneto, selective change gear and double chain drive, and very large braking surfaces. In distinction from the former type of runabout, it has a lighter spring suspension, owing to the use of a lighter body; the seats, besides being of entirely different contour, are lower, giving the close-to-theground appearance already noted; and a larger steering wheel is used, mounted on a column which is given a considerable rake in order to bring it into convenient position. The rear seat, instead of being mounted on a turtle deck, is placed upon an artillery box, and is demountable. On this account, either one or two passengers may be accomodated behind by the use of one or two bucket seats, the box may be left bare, or it may be removed entirely, leaving the flat deck for carrying purposes. Even without removing the box, however, there is ample room back of the driver's seat for stowing such luggage as a trunk, large hamper or several suit cases.

The same spirit is manifested in a new Studebaker creation, also shown for the first time, although mounted on the 30 horsepower chassis which is already well known to 1908 show goers. It is styled the

Suburban Roadster and is adaptable for the transportation of two, three or four passengers, according to circumstances, or to the accomodation of a surprising amount of luggage or camp paraphernalia in the roomy box body. The general form is that of the conventionalized Beverly Wagon, with fully enclosed box body set off with rectangular outside framework into regular panels. The rear seats, of which there

points to the rated weight of the car and the other to the actual weight shown by the scales, proving conclusively that the catalogue states fact with a very respectable margin of truth to spare.

The most recent of the many Franklin offerings is the light rumble runabout, especially suited for the uses of physicians who employ drivers, and occasionally wish to carry a friend or patient in adfirst of the 1908 Ford cars to be seen at any show. Model S, which is made in no less than three varieties, with but small distinction between them as far as really vital points are concerned, is no less a mechanical and manufacturing achievement. In a general way it much resembles it. There are the same motor and transmission, the same features of control, and, practically the same outline, except, that, as in the case



PICTURESQUE "WISTERIA WALK" IN FXHIBITION HALL

are two, are interchangeable and may be mounted on the box as desired to carry one or two passengers.

One of the features of the Franklin exhibit which cannot fail to catch the eye of the visitor is an occular demonstration of the authenticity of the catalogue specifications given out by the maker of this staunch exponent of the air cooled motor and the wood fame. One of the 1908 cars is mounted on platform scales, each wheel being supported independently of the others, the combined indications of the four scales adding up to a figure nearly 200 pounds less than the nominal weight of the car. A large dial mounted on the vehicle is equipped with two hands, one of which

dition. It is built on the model G chassis, has the same 16 horsepower, quadruple motor, equipped with the new concentric valves, and 90-inch wheel base. The rear seat, which is designed to accomodate a single passenger only, is mounted on a plain box, the sides being cut away slightly to afford easy access, while the general effect is that of the continuous body, rather than the detached seat carried on a flat deck. The lines of the vehicle are tastefully arranged, and while the effect is sufficiently light and graceful to be pleasing, it is still decidedly practical and substantial—which is an important point of distinguishment.

Among other favors it was reserved for Boston to have the honor of uncovering the

of last year's model R, the fenders are connected by a running board, while the seats are more liberally proportioned and consequently more comfortable to ride in. Model S Roadster is an improvement on the first, to the extent of a rumble seat, a concave dash, flanged mud guards, and one or two other points which make for an improvement in appearance without altering the road performance of the vehicle. A third adaptation of the same chassis design is found in a wonderfully attractive little inside-driven coupe, which at the price, \$800, is calculated to form a most useful accessory to the business of the doctor, rural or suburban.

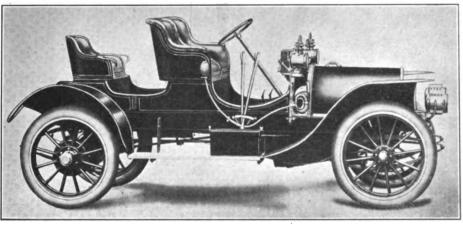
The usual aggregation of closed vehicles,



which has come to be an expected feature of all present day shows, is in this case augmented by a couple of newcomers in addition to that just mentioned. One of these is the taxicab of the new Oakland line which made such a favorable impression on its first appearance at the time of the Chicago show. Like the touring car which it accompanies, this vehicle is of particularly light and graceful mold, and substantial looking withal. The pleasing exterior of these cars is all the more noteworthy as housing one of the most original power plants ever put into a chassis.

Another gratifying interpretation of the motor cab idea is found in the new Atlas vehicle which is being shown for the first of the propeller shaft and is actuated for application of the driving effort by means of a foot pedal, while the speed ratio is controlled by a side lever. By depressing a button in the top of this lever the gear changing arm is released from engagement and a second rocker arm picked up which actuates a cam clutch on a special flange on the upper side of the fly wheel. The effect of moving the lever back and forth after depressing the button is that of "cranking" the motor, and in this way, starting from the seat is made ane easy effort.

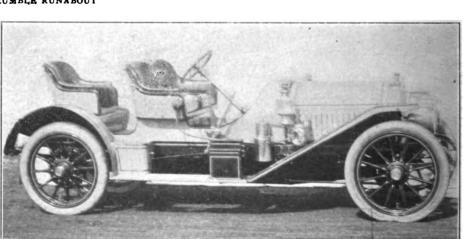
The "Crown Special" is another which has only recently come into being. It is a four passenger runabout of light, racy and modern construction. It is engined with a



FRANKLIN 16 HORSEPOWER RUMBLE RUNABOUT

time and which is mounted on a chassis especially designed for the arduous service which is expected of the commercial passenger vehicle. The power plant is the twin cylinder, two-cycle Atlas motor, which is used in the entire line, planetary change gear and shift transmission to the rear live axle. An unusual and novel feature of the machine, which is sufficient in itself to attract no little attention-particularly in a vehicle intended for practical service of this sort—is the motor starting device. This is a ratchet contrivance operating directly on the fly wheel of the motor and worked from the driver's seat by means of a handle which is placed in the foot board at the right end and just in front of the seat riser. Simply pulling up the handle sharply gives the crank shaft the slight twirl required to set the engine in motion.

One or two cars which are new to Boston, and which have been only in one or two other of the smaller local shows, are worthy of passing note. One of these, the Blomstrom "gyroscopic" car is remarkable in that its two cylinder opposed motor is set in the fore part of the car with its crank shaft vertical. The fly wheel, which is below the cylinders, is of very large diameter and is formed with a perfectly flat surface underneath which serves as the driving member of the double disc change gear. The driven member of this group is mounted slideably on a forward extension



LOCOMOBILE 40 RUNABOUT

45-50 horsepower four cylinder motor, has a selective change gear and shaft drive. By dint of throwing the front axle well up to the radiator line and setting the rear axle back, the 114-inch wheel base is made to support the neat, low body in easy and effective fashion.

The Speedwell, which is still another of the same class, is shown in runabout and touring car types, as well as in plain chassis. It is a 40 horsepower, shapely vehicle, built on approved lines and having about it no element of untried or unproven quality. The cylinders are individually cast and measure 434 by 5 inches. Double ignition is a double drop just in front of the rear wheel to allow for a low entrance and easy step without reducing the road clearance correspondingly. The power of this model is given as 28-30 and other general specifications include 112-inch wheel base, 34 by 4-inch tires, semi and full elliptic springs, front and rear, transmission by multiple disc clutch, selective gear set mounted on ball bearings, and cardan shaft. A somewhat similar mechanical equipment is applied to the "Skimabout" which is equipped as a light, two passenger vehicle for hasty road work.

provided by the use of both high tension

magneto and battery and coil systems, the

pump is gear driven, the radiator is cellu-

lar. Transmission is secured by means of a

selectively operated, vertical gear set and propeller shaft, the entire system being

mounted on Timken roller bearings. The

body is hung on semi-elliptic springs in

front and full elliptics in the rear, the latter

being coupled to an angle bracket well above the frame in order to give plenty of

spring set without raising the body too far

off the ground. The wheel base is 116

inches, the wheels 34 inches in diameter

shod with 4-inch tires all around, and the body is designed for three and five pass-

engers respectively, in the runabout and

The Brouhot car, which was one of the promised innovations of the show, failed to materialize during the early part of the week, as did the Viking-a local production which was to have made its maiden appearance. Another car which was not on hand on the opening night, but which was promised certainly for today (Thursday) is the new P & S, which is just being brought out by the Palmer & Singer Co., New York City. It is a machine mounting the "C. G. V." type of bonnet with radiator suspended below the frame and made in three general types corresponding to the uses of the touring, runabout and town and country cars. In the latter, which is equipped with landaulet body, the frame is developed into

touring car models.

Practically all cars of wide repute have



been shown previously at the New York and Chicago shows. But, as is always the case, several New England makers reserve their efforts for this show, where, with pardonable loyalty they display their new models for the first time. In this instance there are ten makers and as many vehicles which are to be included in this category. One of these is the Shawmut, which the Shawmut Motor Co., Stockham, Mass., introduces to its second year of existence with a new motor of improved pattern and

dredger oiler which, unlike many devices of the sort, has a variable rate of feed, made possible by altering the number of teeth picked up by the feeding pawl at each revolution of the driving shaft. The vehicle itself is expensively built along the lines generally characterized as "continental" and is originally designed in every particular saving that of ignition and body equipments.

A new model known as the "Forty Roadster" has been added to the Springfield line, which is the product of the H. C. Medand the high backs, which are carried out uniformally for both front and rear seats. The rear member, as is the case with several other of the new runabout models, may be used either as a one or two passenger accomodation by adapting the double removable bucket seats to suit the instant's requirement. The wheel base is 114 instead of 108 inches, as in the touring cars. Of the changes in construction which have been introduced this year, the adoption of double ignition by means of Comet



GENERAL VIEW IN GRAND HALL

several other improvements, while yet retaining many of the features which distinguished it a year ago. The motor in question is of quadruple pattern and has twin cast cylinders of 4.8 by 5.5-inch, bore and stroke. It is distinguished among other points by an original carburetter set in close up to the cylinders with a large mixing chamber leading directly to the siamesed intake ports, practically without anything corresponding to the ordinary manifold. A further point of interest is the use of independent exhaust pipes from the cylinder groups to the muffler, thus giving a perfectly free outlet for the gases at all times. Another new feature is the original

craft Automobile Co., Springfield, Mass., in addition to which several changes have been made in the construction of the chassis. which is practically the same with all types. The new machine is a two, three or four passenger vehicle of the popular order, mounting a nobby and rather unusual sort of body which carries out the idea of the old time box buggy to the extent of employing raised sides for both front and rear foot boards, thus excluding all draught from the lower extremities of the occupants, and incidentally, affording a touch of novelty to the general appearance of the vehicle which is most gratifying. A further novel effect is secured by the exceptionally low seat line

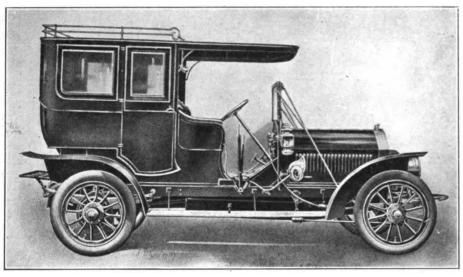
magneto, unit coil and high tension distributor, in conjunction with the battery equipment, is noteworthy, as is the use of ball bearings throughout the axle equipment, in place of roller bearings. A new type of transmission also is employed, involving the use of a selective gearset having chrome nickel steel gears, and the use of a buffer torsion rod, in place of the radial side rods formerly employed.

Although the Stilson Motor Car Co., Pittsfield, Mass., has been making six-cylinder cars, and six-cylinder cars only, for some little time, this is the first occasion on which one of them has been on view at any show. The vehicle is characterized by

a number of original points, chief among which are those certering about the motor. The power plant is supported on a subframe running well back of the center of the car, and the engine base is carried on this by means of solid webs running the entire length of the crank case on either side. An unusual feature in addition to this, is the method of lubrication, which consists of a flush-feed system actuated by gravity from a tank concealed in the concave dash, and supplied by pump return from the engine base. The leads from the supply tank are carried over to the left side of the crank case and delivered to a distributing manifold concealed in the base, and tapped off

and the wheel base is 115 inches. The new body carries two double bucket seats of practically identical pattern, is substantial in appearance, and serviceable looking as

Bay State Forty, is a name which first came to light a year ago when the Bay State Automobile Co., Boston, offered its initial product at the show. The product remains at this time, practically unchanged, so far as both minor and major details are concerned. Among the features of the machine which are particularly well worth remembering, are the use of "triple" ignittion, by means of a high tension distributor and unit coil-used either with magneto or at intervals for the various bearings. Thebattery—as well as the usual battery and



STILSON SIX-CYLINDER CAR

crank shaft is supported on seven bearings. which is made possible by the use of independently cast cylinders. Like the oil tank, the coils are concealed in the dash. They are employed in connection with the full system of double ignition, using two sets of plugs, and the Bosch magneto. The car itself, outside the engine, is designed in the conventional way. It has 123-inch wheel base, 34 or 36-inch wheels at the option of the purchaser, 4 and 41/2-inch tires, front and rear, and weighs 3,400 pounds. The motor; which is 411-16 by 51/2 inches, bore and stroke, is rated at 50-60 horsepower.

The reorganized Grout Automobile Co., Orange, Mass., brings to the show, in addition to its touring car, a brand new "tourabout," which is to say, a four-passenger car of approved pattern, mounting a number of the Grout features, such as double ball bearings, original in design and closely resembling the so-called bicycle type for each of the wheels, and the use of a wood frame armored, and supporting the motor and transmission by means of a metal sub-frame. The change gear system is selective in operation, but has a direct acting lever, the selection being made by means of a finger action which picks up one or the other of two rocker arms, actuating the sliding members. The motor is rated at 35 horsepower,

coil system, with two sets of plugs; the use of a "cushion box," or shock absorber in the transmission line, between the clutch and change gear; the method by which the sub-frame carrying the power plant is supported on three points, with the third in the rear; and the use of double trussed torsion rods on the rear axle. The motor supplies 40 horsepower on requirement, the change gear affords three forward changes of speed, the wheel base is 122 inches, and the weight inclusive of equipment is 2,900

Coincident with the opening of the present show, Boston became the birthplace of two new motor buggies, both of local origin, and both designed on somewhat original lines. Because of their extreme youth, it is not surprising that neither of these newcomers should have been on hand for the opening of the exhibition. In the Boston Highwheel automobile, the Boston Highwheel Auto Mfg. Co., Boston, is producing not simply a new member of a rapidly growing class, but also a vehicle embodying a number of radical features. The motor, which is of the double-opposed, aircooled type, is mounted within the body and directly over the rear axle. Transmission is accomplished by means of a single belt operating over a pair of expanding pul-

leys adapted to give a wide range of speed variation by the simple movement of one lever, and without the necessity of declutching when changing speed. For purposes of reversal, a double bevel gear connection is established between motor and transmission, only one being in use at a time, one affording the forward and the other the backward drive. A trapezoidal belt is employed, 11/2 inches wide, by 3/4 inch deep. Another novel feature, is the adoption of a differential brake, acting upon the balance gear in the counter shaft, which drives the rear wheels through side chains. By depressing a foot button at any time, the action of the differential is checked, whereby skidding, or excessive differentiation due to unequal adhesion in mud or snow, may be checked. The wheels are 44 and 48 inches in diameter, front and rear, respectively, and are mounted on roller bearings of original design. The wheels are heavily dished, and are shod with 13%-inch solid tires. The weight complete is about 900 pounds.

Although designed and marketed in Boston, the Crown Motor Carriage, which is just being introduced to Boston by the Crown Motor Vehicle Co., is made largely in Amesbury, Mass., whence come so many New England carriages. It has a double opposed, 12 horsepower motor, air cooled, and hung on three points. Transmission is by means of an original adaptation of the multiple disc clutch idea, two clutches being employed, and affording two speeds forward and two in the reverse direction. The wheels are 40 inches in diameter, shod with 11/2-inch solid tires. The wheel base is 74 inches. A special feature is made of the body, which is of unusually roomy design and has a seat 21 inches deep, and 43 inches long.

The Bailey electric phaeton, manufactured by S. R. Bailey & Co., Amesbury, Mass., will be remembered as the vehicle distinguished by its originality of construction-an originality which commences with the wheels, and continues through every fiber of the structure. As shown for the first time last year, it embodied in the frame, body, and running gear, a number of unique features. Most of these have been continued over into the 1908 model, while one or two new ones have been added to them. Among these may be mentioned the steering device. This is in principle and action, the same as the ordinary tiller arrangement. Upon the upper extremity of what is apparently an ordinary steering column, is mounted a wheel, complete except for the side next the driver, which is bounded by a short chord, leaving the outline roughly D-shaped. The entire column takes the part of the tiller and is swung from side to side in driving the car, its motion being guided by an inverted segment mounted on the dash. An ingenious switching device, prevents the running plug from being inserted until the controller-which is mounted above the steering "wheel"-is set in neutral position, while corresponding arrangements provide for the interrupting of the motor circuit whenever the foot brake is applied.

Of all steam cars, none perhaps, has a stronger hold over Boston than the Newton product, the Stanley, which this year appears in somewhat modified form as to power plant, and with several variations in body mounting as well. Of the former, may be mentioned the use of a new water indicator, and a new pump transmission which is a simplification and improvement over the former arrangement, as well as the new double by-pass on the water line, which is connected and controlled through the steering column. Of the new models, Model K, is a gentlemen's roadster, having practically the same power plant as was the moving feature of the one-time famous "Florida Bug," while Model M, is a seven passenger touring car-the first of its kind to be made by the Stanley Motor Carriage Co.

Another newcomer in the quartet of steam representatives present, is the Clark, made by Edward S. Clark, and a thoroughly Boston product. The latest model, which is on view at the show, is equipped with a new engine, which, unlike that employed last year is of the single, four-cylinder opposed pattern, having single acting pistons and poppet valves. The transmission gearing also has been improved to the extent of embodying high, low and neutral gears. Reversing and cutting off are accomplished by manipulating the cam shafts. The vehicle on exhibition is a special model, built on the standard chassis, but differing from the regular model in several points, such as the use of the aluminum dash, special body and trimmings. The motor is rated at 20 horsepower, the wheel base is 110 inches, the tires are 36 by 4 inches, and the total weight is 2,800 pounds.

Boston is no exception to the accessory rule of all shows, but rather the superlative degree of comparison. The present show possesses by way of attraction nearly everything which has charmed or disgusted the accessory chaser at other shows and several things more, some of which are well able to stand alone.

The rotary motor, for instance, is obliged to stand alone, because it has no rival. As exhibited by the American Rotary Moto Co., Boston, it proves to be a rotary motor and not a motor which rotates, in that it contains but one essential moving part which is a piston of approximately oval section revolving in a casing which is opened at either end to receive a pair of abutments which bear against the piston to form a closed explosion chamber between it and the walls of the casing, or open, to release the spent gas to the exhaust pipe. Since there are two such abutments and consequently two explosion chambers, the mixture, which is admitted under pressure, is fired simultaneously and produces two co-incident impulses every revolution. These

motors are not quite ready for the markét, but shares in the company's stock are announced in a circular as being for sale at a popular price.

Then there is the change gear system which, though of the ordinary sliding pinion type, is so devised as to prevent all possibility of stripping the gears when meshing them. To this end, the driven gears are mounted loosely on a screw thread instead of being keyed to their shaft as is ordinarily the case. When the primary engagement takes place and the ends of the



CENTRAL VIEW IN GRAND HALL

teeth are meshed, the driver commences to turn the driven gear, as is the case in the common arrangement. As the only resistance encountered is that of the screw thread mentioned, and a light spring which tends to hold the gear away from its position of normal engagement, however, there is no chance of stripping the teeth. By the time the teeth have engaged to their full width of face, the driven member has advanced far enough along its screw thread to pick up a double dog clutch on the shaft, which it then begins to drive. Conversely, when the gears are drawn out of engagement the spring referred to develops sufficient tension to run the driven gear back along its thread and free it of the driving dogs. The device is being shown by its inventor, H. O. Fletcher, Hyde Park, Mass.

Having got this far in the "improvement" of the automobile, it is natural to look next to the tires. There the investigator at once falls into a perplexing dilemma. If he prefers the "legitimate" in the sense of the conservative and popular patterns already in current use, he may visit the booths where such well known brands as the Hartford, Goodyear, G & J, Diamond or Fire-

stone tires are on view. But if he prefers the more novel devices, he must investigate the original principles of the Dow and the new Shaw Self-Sealing tires, both of which are alike in comprising an inner tube having an envelope wall on the tread side into which some special compound is inserted for the everlasting damnation of all the little puncture fiends.

In the Shaw tire, which the Automobile Utilities Co., Boston, is showing for the first time, the filling in question comprises a layer of melted rubber and asbestos fiber which it is claimed will amalgamate perfectly with the tread rubber when blown into a wound in the tire, forming a perfect cure for the ill. There is also the Zeglen Bullet Proof tire, which besides being immune from damage by the wayside sheriff is claimed to be unusually resistent in the matter of ordinary punctures, if not absolutely hole-proof in every way. The Zeglan Bullet Proof Cloth Co., Chicago, Ill., also make a specialty of bullet proof vests and material. The Ball Bearing Tire Co., Providence, R. I., presents a modern version of a somewhat old idea in the ball bearing tire, in which the shoe encloses a rubber filler containing a series of spherical, molded pockets which contain as many balls of pure gum rubber, vulcanized and moderately inflated, while on the rim side is an open chamber capable of inflation to the required degree. If one ball is punctured, the tire is not deflated-and there you are, simple as can be! The Commonwealth Rubber Co., Reading, Mass., exhibit the Mitchell Puncture-Proof tire, which is practically a tire within a tire-but not in the ordinary sense. The outer tire is of the solid variety, while the inner and pneumatic one is of smaller great diameter and serves as a support for the rim which carries the tread shoe.

While omitting the previously exhibited wares of such makers as produce the "Connecticut," "Heinze," "Witherbee," and "Pittsfield," and skipping the several well known makers of batteries, and commutators and attachments and fixings and supplies, there is yet considerable to see that is new in the ignition line. As, for instance, the Two-Spot spark plug shown by the Two-Spot Mfg. Co., Canasota, N. Y., which comprises a central insulated electrode and an extended and hooked ground wire, between which is interposed a little spool of porcelain surrounded by a single coil of fine wire. The spark jumps first, from the insulated pole to one side of the spool, and then from the spool to the ground wire, making two jumps across two gaps. As the spool is mounted in such a way as to turn constantly under the influence of the action going on in the cylinder, there is supposed to be no chance for sooting to occur. Another novelty in the plug line is to be seen in the Sterling, in which the Windsor Mfg. Co., Worcester, Mass., presents a device, ordinary, except that the insulated central wire is bent twice, first at

right angles and toward the shell, and then circularly and parallel to the beveled edge of that member. The spark has opportunity to jump in several points at once-if it wants to. And apparently it does. The Sterling Mfg. Co., also are showing a new automobile vise, it should be observed parenthetically, which is excellent in several ways, but principally because it is small and can be clamped to the running board without necessitating the use of any permanent fixture likely to interfere with the normal use of the step. The device is swiveled on its base and swiveled in its main clamp so that it has a universal motion, contains pipe jaws under the main faces of the jaws. and wire holding jaws as well. Furthermore it is hardened and oxidized, so that it is durable beyond the average measure of such contrivances. Speaking of ignition systems, however, the Orswell method of firing the charge in the motor cylinder, consists in the use of a single master vibrator enclosed in a neat case of vest pocket size, and the igniter, which is a combined coil and plug, having no external secondary connection, and which screws directly into the cylinder it is intended to fire. The system of the Sterling Alternating Ignition Co., Binghamton, N. Y., is such that every time the primary circuit is closed through the single master vibrator, the current flows oppositely to its direction during the previous and succeeding ignition periods. This corrects the pitting action of the current on the contact points of the vibrator.

If you want to know how the Standard Speedometer works, you can readily tell by observing the Brobdinagian working model on view at the stand of the Parker Mfg. Co., Roxbury, Mass., where an exaggerated reproduction of the device informs you it is the principle of the fly-ball governor all over again. Or, in the case of the Casgrain Speedometer, you are permitted to dissect one of the devices all by yourself and examine the parts, in order to learn that it is fluid friction, brought about by the agitation of the oil-contents of the device, which is set in motion by a little paddle wheel, which drives a second and enclosing paddle wheel sufficiently to rotate the indicating drum and reveal the number indicating the speed of the vehicle. You discover, by the way, in case you did not know it already, that speedometers have formed an interesting subject for study to a good many men in times past. Their conclusions are exhibited in concrete form at the booths of the Jones Speedometer Co., Hoffecker Co., R. H. Smith Mfg. Co., Warner Instrument Co., Wm. H. Jones, and others, not to mention that of Chas. E. Miller, where you find a little of most everything else as well.

The same is true in kind, of the displays of shock absorbers. The Hartford Suspension, the Foster, Kilgore, Hotchkin, Gabriel and others, may be familiar in action. But the Flentje shock absorber is a new device, of the fluid type, working like a

pump with a multi-ported valve on its upper face, to check the rebound. The Du-Ro, which is the invention of Duncan Robinson, Boston, involves a novel application of the principle of the ordinary leaf spring, obtaining its action through the combined effects of elasticity in the blades, and friction between the leaves. A multiplicity of very thin, flat spring leaves, are packed away together in a circular case which is so shaped that the movement of the working part causes the leaves to be bent up with increasing movement and resistance progressively. Another new thing in the shock abosrbing line, is the offering of the Ciglia Shock Preventer Co., New York City, which looks very much like something which it is not. The necessary resistance to motion in the arm, is obtained by means of a couple of interlocking discs, having irregular faces, held together by means of a five-pronged star-shaped, spring washer. When the arm moves, the tendency is to separate the discs against the pressure of the washer.

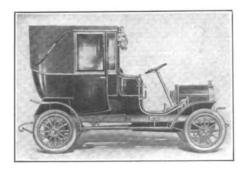
Safety devices, in general, multiply without end. But the Barber Safety, which is the indefinite name applied by the Motor Safety Mfg. Co., Brooklyn, N. Y., to its novel device, is worthy of more than passing note. It is a scheme devised to preserve the bones of him who would fain start the "kicking" motor without retarding the spark. By means of a ratchet detent mechanism which is inactive so long as the resistance of the motor crank shaft is normal, the ordinary starting ratchet is disengaged just so soon as the resistance in the motor exceeds a predetermined amount-which it is sure to do in the event of a backfire. The bone saver is enclosed in a small metallic casing of inconsequential aspect, and is attachable to any starting crank without requiring material alterations in the arrangement.

Excepting the candy, lemonade, music and newspapers, the exhibits are as follows:

Automobiles.

The White Co.-White. J. W. Maguire Co.—Great Arrow. Thos. B. Jeffery & Co.—Rambler. Stanley Motor Carriage Co.—Stanley. Curtis-Hawkins Co.—Chadwick, Spe

Geo. J. Dunham-Royal Tourist, Corbin. Winton Motor Carriage Co.—Winton. Reed-Underhill Co.—Knox.



ATLAS TAXICAB

Park Square Auto Station-Berliet, Stoddard-Dayton. Peerless Motor Car Co.—Peerless. Free S. Smith—Autocar, Apperson.
Geo. H. Lowe—Imperial, Aerocar.
J. W. Bowman Co.—Stevens-Duryea.
Mills-Kennedy Co.—Welch.
S. R. Bailey & Co.—Bailey Electric.
Morgan B. Kent—Hotchkiss, Stearns, Blomstrom. Grout Automobile Co.—Grout.
W. M. Jenkins & Co.—Mitchell.
Shawmut Motor Co.—Shawmut.
Dodge Motor Vehicle Co.—Pope-Toledo,
Pope-Hartford, Pope-Tribune, Pope-Wa-Jacobs & Bartlett-Mercedes, Kingston. F. R. Parker & Co.—Elmore.
W. A. Frederick Co.—American, Overland, Marion. Franklin Automobile Co.—Franklin. F. E. Wing—Marmon.
Crawford Automobile Co.—Crawford. Harry Fosdick Co .- Atlas, Springfield, Baker Electric.
Locomobile Co. of America—Locomobile.
Columbia Motor_Vehicle Co.—Columbia. Maxwell-Briscoe-Boston Co.-Maxwell. Ford Motor Co .- Ford. Morrison-Price Co.—Rainier,

Mora.
A. T. Fuller—Packard, Cadillac. A. T. Fuller—Packard, Cadillac.
Boston Motor Co.—Acme.
Matheson Co. of Boston—Matheson.
H. C. & C. D. Castle—Lozier.
Premier Boston Depot—Premier.
Linscott Motor Co.—National, Reo.
Edward S. Clark—Clark.
Whitten-Gilmore Co.—Thomas.
F. E. Randall Co.—Pullman, Stilson.

Pennsylvania.
Algonquin Motor Car Co.—Oldsmobile.
Lane Sales Co.—Lane.
Austin Agency—Austin.
Oakland Motor Car Co.—Oakland. Oakland Motor Car Co.—Oakland.
South End Motor Car Co.—Brush.
Northern Motor Car Co.—Northern.
Simplex Motor Co.—P. & S. Simplex.
D. P. Nichols & Co.—Frayer-Miller.
K. A. Skinner—De Dion. Brouhot.
Ferd. F. French—Schacht.
Waltham Mfg. Co.—Waltham-Orient.
Butler Motor Car Co.—Rapid, Cleveland.
Pierce-Racine.
Boston Hightwheel Auto Mfg. Co.—Boston

Boston Hightwheel Auto Mfg. Co.-Bos-

Chas. A. Eaton—Lambert.
H. C. Stratton—Kissel Kar, Car de Luxe.
The Fiat Co.—Fiat. Renault Freres Selling Branch-Renault. Renault Freres Selling Branch—Renaus Studebaker Bros. Co.—Studebaker. Bostonia Motor Co.—Cartercar. Crown Motor Car Co.—Glide, Crown. P. W. Wood, Jr.—Holsman. Corey Hill Garage Co.—Kiblinger. Bay State Auto Co.—Bay State Forty. Pierce Bros.—Delivery Wagon.

Motorcycles. Motorcycles.

Hendee Mfg. Co.—Indian.
Light Mfg. & Foundry Co.—Light.
Ovington Motor Co.—F. N.
American Motor Co.—Marsh.
Reliance Motor Cycle Co.—Reliance.
Merkel Motor Co.—Merkel.
Reading Standard Company—R-S.
Aurora Automatic Machine Co.—Thor.
S. M. Supplies Co.—Excelsior.
P. W. Wood. Jr.—Curtiss.
Crouch Motor Co.—Crouch. Crouch Motor Co.-Crouch.

Accessories.

Motor Safety Mfg. Co., Brooklyn, N. Y.-Safety cranking device. H. Snowden, Philadelphia, Pa.—Flash-H. Snowden, light spark plug. E. B. Badger & Sons Co., Boston-Hoods, tanks, fenders, piping, etc.

Hull & McArthur, Boston-Ericka hand

w. J. Forbes, Boston—K-W magnetos.
Two-Spot Mfg. Co., Canastota, N. Y.-

Two-Spot spark plug.

John A. Salmon, Boston—Monograms.
G. A. Haws, New York City—Panhard oil.

Wm. Cramp & Sons' Ship and Engine Building Co., Philadelphia, Pa.—Bronze

castings and parts.

Eco Mfg. Co., Boston—Acetylene storage tanks and torches.

Draper Bros., Canton, Mass.—Robes.

Atwater Kent Mfg. Works, Philadelphia,

a.—Ignition apparatus. Baldwin & Co., Bangor, Me.—Tire repair outfits

Windsor Mfg. Co., Worcester, Mass.— Sterling spark plug, Sterling auto vise. Stuart Howland Co., Boston—Lamps, electrical devices, Wizard tubular ignitor.

Orswell Ignitor Co., Boston-Ignition systems.

Atlantic Refining Co., Cleveland, O.-Lu-

Stepney Spare Motor Wheel Co. of Amer-

ica—Stepney spare wheels.

Anderson Spark Plug Co., Boston—An-

derson spark plugs.

Valvoline Oil Co., New York—Lubricants.
Echo Horn Co., Cleveland, O.—Exhaust

horns. H. O. Fletcher, Hyde Park, Mass.—Auto-

matic meshing change gear system.

Burns Boston Battery Co., Boston.
H. F. Campbell. Boston—Duplex coils, Auto-Marine spark plugs, Red Cross spark plugs, Vim motors.

Voorhees Rubber Co. Joseph Co. Joseph

Voorhees Rubber Co., Jersey City, N. J.— Rubber sheetings and fabric. J. O. Caldwell, Jr., Boston—"Oilright" cans Old Corner Book Store, Boston—Maps and automobile literature.

Boston—"Du-Ro" Robinson, Duncan

Ball bearing tire.

Albert Champion, Boston—Ignition specialties

Non-Explosive Safety Can Co., Boston-Safety cans and containers.
Zeglen Bullet-Proof Cloth

proof fabric and non-puncturable tires.

Consolidated Optical Mfg. Co., New York City—Goggles and glasses.
Ciglia Shock Preventor Co., New York City—Ciglia shock preventor.
Nonparell Brass Co., Providence, R. I.—

Wind shields, robe rails, and fittings.
Defiance Chain Co., Boston—Chain tire grips. T. A. Bemus Co., Inc., Boston—Timers

and distributors.

Shove & Gage Co., Inc., Providence, R. I. -Metal polishes. Hillman Auto Supply Mfg. Co., Boston-

Lamps, fittings and supplies.

Underhay Oil Co., Boston—Lubricants.

A. J. Wilkinson & Co., Boston—Tools,

The Pantasote Co., New York City—Pantasote top and cover fabrics.

T. C. & W. L. Frye, Rochester, Pa.—
Jacks and motor equipment.

Westchester Appliance Co., Yonkers, N.

Y.—Westchester ignition supplies.

Ajax-Grieb Rubber Co., New York City—

Aiax tires.

National Carbon Co., Cleveland, O.-National dry batteries.

Leather Tire Goods Co., Newton Upper Falls, Mass.—Woodworth tires and treads.

New England Motor Co., Lowell, Mass.-Rex ignitors.

Park Square Auto Station, Boston-National batteries and sundries.

B. F. Goodrich Co., Akron, O.-Goodrich tires.

Connecticut Tel. & Elec. Co., Meriden, Conn.—Connecticut ignition apparatus.
A. W. Harris Oil Co., Providence, R. I.—

Harris oils. Hartford Rubber Works Co., Hartford,

New York & New Jersey Lubricants Co., New York City—Non-Fluid oils.

Pennsylvania Rubber Co., Jeannette, Pa.

-Pennsylvania tires. Heinze Electric Co., Lowell. Mass.—

Heinze ignition apparatus.
Gilbert & Barker Mfg. Co., Brooklyn, N.
Y.—Storage tanks and measuring pumps.
Visor Knitting Co., Niagara Falls, N. Y.

Mufflers.

Hopewell Bros., Cambridge, Mass.-Tire cases, covers, etc.
J. T. Stanley, New York City—Mobo

cleaners. J. Frank Cutter, Cambridge, Mass.-Bod-

ies and tops.
Sage's Trunk Depot, Boston—Automobile trunks and luggage carriers.
L. C. Chase & Co., Boston—Top and

cover leathers.

Wm. C. Robinson & Son Co., Boston— Autoline lubricants. Vacuum Oil Co., Rochester, N. Y.—Vacuum and mobiloils.

Boston Gear Works, Norfolk Downs, Mass.—Steering devices and parts.
Motor Car Specialty Co., Boston—Speed-

ometers and equipment.

T. F. Russell & Co., Boston—Accessories.

American Electric Novelty & Mfg. Co., New York City-Ever Ready specialties. Firestone Tire & Rubber Co., Akron, O.-

Firestone tires.

Atwood Mfg. Co., Amesbury, Mass.— Lamps and generators. Gilbert Mfg. Co., New Haven. Conn.— Tire cases, covers, and automobile fabric

supplies. F. E. Bowers & Co., New Haven, Conn.— Bowers carburetters.

Witherbee Igniter Co., New York City-

Witherbee ignition apparatus.

The Angier Co., Boston—Universal tire protectors and supplies.

Empire Auto Tire Co., Trenton, N. J.— En pire tires. Absorber Co.,

Truffault-Hartford Shock New York City-Truffault-Hartford suspen-

Auto-Igniter Co., New York City-Autoigniters.

National Auto Accessory Co., Boston-National carburetters. F. R. Parker & Co., Boston-Pan-O-Lite

lubricants.

Wm. J. Smith Co., New Haven, Conn.—Adjustable reamers. Stackpole Battery Co., St. Marys, Pa.-

Stackpole batteries. Whitney Mfg. Co., Hartford, Conn.-

Roller chains.
G & J Tire Co., Boston—G & J tires.
Eagle Oil and Supply Co., Boston—No

Karbon cylinder oil.

Dover Stamping & Mfg. Co., Cambridge, Mass.—Drip pans, funnels, measures, etc.

Commonwealth Rubber Co., Reading, Mass.—Mitchell Puncture-Proof tires.

Michelin Tire Co., Boston—Michelin tires,

Hoffecker Co., Boston-Hoffecker speed

indicators.
Electric Storage Battery Co., Philadelphia, Pa.—Exide batteries.
Prest-O-Lite Co., Boston—Prest-O-Lite

Post & Lester, Hartford, Conn.-Acces-

sories and supplies.
Edgar T. Ward & Sons, Boston—Seamless tubing, and metal supplies.
John A. Mason, Boston—Tops, trunks and

luggage carriers.
Hess Bright Mfg. Co., Philadelphia, Pa.
—Annular ball bearings.

Pettingell-Andrews Co., Boston-J-B ignition supplies.
W. J. Connell, Boston—Casgrain speed

indicators, ignition specialties, plies.

Boston Auto Gage Co., Boston-Triumph tank gages.
White & Bagley Co., Worcester, Mass.—

Oilzum and Cleanzum. R. H. Smith Mfg. Co., Springfield, Mass.

Springfield motometers. Acetyvone Co., New York City-Generators and lamps.

Never-Miss Spark Plug Co., Lansing, Mich.—Never-Miss spark plugs.

Warner Instrument Co., Beloit, Wis.—

Warner Autometers. Wm. H. Jones, Boston—National speed

indicators.

Tire Co., New York City-Dow Dow

Randall-Faichnay Co., Boston-B-Line

oil guns. Chas. E. Miller, Boston—Accessories and supplies.
National Valgrinok Co., Boston—Valgri-

nok grinding compound

F. S. Southergreen, Manchester, Mass.— Swinging tire holders.
Globe Optical Co., Boston—Optical sup-

plies.
C. J. Downing, New York City—Horns, tire holders, and fittings.
Century Optical Co., New York City— Optical supplies.

Brown Folding Stool Co., Boston—Fold-

ing stools.
Solderine Co., Boston—Solderine com-

pound. Boston Auto Light Co., Boston-Boston

gas tanks.
F. H. Howard Co., Watertown, Mass.—

Coils and commutators Kilgore Mfg. Co., Oldtown, Me.-Kilgore

shock eliminators. Wm. H. Richardson Co., Boston-Cloth-

ing.
W. W. Winship, Boston—Trunks.
S. F. Bowser & Co., Inc., Fort Wayne, Ind.—Gasoline storage outfits.
Pittsfield Spark Coil Co., Dalton, Mass.—
Brusseld ignition apparatus. Pittsfield ignition apparatus.
Goodyear Tire & Rubber Co., Akron, O.

Goodyear tires.

Jones Speedometer Co., New York City-Jones speedometers. Diamond Rubber Co., Akron, O.-Dia-

mond tires. Gray & Davis, Amesbury, Mass.—Lamps. Veeder Mfg. Co., Hartford, Conn.-Odo-

meters and tachometers. Fisk Rubber Co., Chicopee Falls, Mass .-Fisk tires.

Eastern Carbon Works, Jersey City, N.

Morgan & Wright, Detroit, Mich.—Morgan & Wright tires.

Columbia Lubricants Co., New York City

-Monogram oils. F. Shirley Boyd, Boston—Supplementary

spiral springs. G. H. Proctor Supply Co., Boston-Republic tires

Parker Mfg. Co., Roxbury, Mass.-Standard speedometers.
W. S. Daniels, Boston—Lamps, rails and

ignition equipment. Massachusetts Auto Co., Boston-Elastic

tire filling.
Gabriel Horn Mfg. Co., Cleveland, O.—
Gabriel horns and shock absorbers.

J. W. Coglan Co., Boston—Monograms. William Nolan, Boston—Tops, wi

Nolan, Boston—Tops, shields, and body work.

A. Terminello, Boston—Flash Kleaner.

P. A. Murray & Co., Newton, Mass.—

Tops.
S. M. Supplies Co., Boston—Accessories and supplies.

Fairbanks Co., Boston-Marine engines. Fuller & Sullivan, Boston-Leather gar-

American Rotary Motor Co., Boston-Ro-

tary gasolene motors.

Melrose Auto Co., Melrose, Mass.—Steam

automobile engine. Judson L. Thompson, Waltham, Mass.—

Kerosene burners. West & Dodge, Boston-Pattern makers and designers.

Geo. F. Kellom & Co., Philadelphia, Pa .-

Automobile Utilities Co., Boston-Shaw

self-sealing tire.
Teel Mfg. Co., Medford, Mass.—Top ma-

Teel Mfg. Co., Medtord, Mass.—1 op materials, tire cases, covers, etc.
Swinehart Clincher Tire & Rubber Co.,
Akron, O.—Swinehart tires.
Columbia Vehicle Tire & Top Co., Boston—Tops, tire cases, and covers.
Moore-Smith Co., Boston—Fur coats.
Norton Grinding Co., Worcester, Mass.—
Emery wheels and grinders.
St. John Rubber Co., Boston—St. John

St. John Rubber Co.. Boston—St. John cushioned, non-puncturable tire.
Chandler & Farquhar Co., Boston—Machinery and tools.
Coates Clipper Mfg. Co., Worcester,

Mass.—Coates flexible shafting.
Coes Wrench Co., Worcester, Mass.—

Coes wrenches.
Walden Mfg. Co., Worcester, Mass.—

Walden ratchet wrenches. Earnst Flentje, Cambridge, Mass -

Flentje gasolene separator and shock absorber. National Auto Top Co., New York City-

Tops, covers, and casings.
Worcester Pressed Steel Co., Worcester,

Mass-Pressed steel parts.

Smith Gave San Jose a Show.

Although San Jose, Cal., has not a sufficient number of automobile dealers to make a large show possible, it possesses one dealer who is alive to his opportunities-Harrison P. Smith, Inc., agent for the Stoddard-Dayton, Pope-Hartford, Reo, Kisselkar and Baker. Smith held a show of his own on Thursday, Friday and Saturday, February 27, 28 and 29, and had factory representatives on hand to explain the features of the five cars on display. The garage was tastefully decorated, and several local concerns took the opportunity to serve free refreshments and dispense music. More than 5,000 persons were entertained during the three days the show was in progress and Smith booked several sales as a result. Other dealers expressed satisfaction over its effect in stimulating interest, while Mr. Smith is so well satisfied that he purposes an annual repetition.

Lincoln's Show Drew a Crowd.

Lincoln's first automobile show attracted a large crowd of Nebraskans to the Auditorium in that city last week. The show opened on Monday and continued until Saturday last, 29th inst. Nearly all the local dealers were represented, the cars on display being the Winton, Buick, Northern, Oldsmobile, Aurora, Maxwell, Jackson, Lambert, Glide, Rambler, Mitchell, Holsman, Baker, International and Fuller. The last named is made by the Angus Co., of Angus, Neb. The first car, made eight years ago, holds the distinction of being the first "made in Nebraska."

THE RUMPUS THE WOMEN RAISED

It Upheaves the San Francisco Dealers' Association-But Their Show Succeeded, and Wu Praised Them.

"Where is the man who has the power and skill

To stem the torrent of a woman's will? For if she will, she will, you may depend on't;

And if she won't, she won't; so there's an end on't.

In this era of suffragetting and the equalpay-for-equal-work movement, the poetic truism from the pillar erected on the mount in the Dane John Field, Canterbury, is particularly appropriate.

When the Automobile Dealers' Association of California some time ago decided that it would not hold a show in San Francisco this year, it reckoned without its nemesis-the Progressive California Woman. As was told in the Motor World several of the dealers in the association were in favor of holding a show, while others were against the proposal. Upon putting the question to a vote the opposers of the idea got the decision, but by a very small majority. Then the California Woman's Automobile Club heroically came to the rescue with a decision to hold a show, and as the organization of feminine mahouts had no strings to it, decided it would not ask a Mere Man's association whether or not it might hold a show. The very idea! What was to hinder the women from holding a show if they wanted to? Nothing!

When the dealers' association saw that many of its members intended to exhibit at the women's show and in fact had already secured space, a most remarkable resolution was passed. It was to the effect that those dealers who already had signed for space might exhibit just this once, but those who had not been so fortunate must positively not show their goods at the women's show under penalty of a fine and possible suspension from the association.

The result may be imagined. According to San Francisco advices the Automobile Dealers' Association of California is threatened with disruption. Many of the dealers who were thus shut out by the resolution of the association do not like the discrimination and the first outbreak occurred last week when Charles A. Hawkins, western manager of the White Co., sent a pointed letter to the association, withdrawing from it both as a member and as a director. In no gentle terms he called the managers of the dealers' combination 'dogs in the manger" and also reflected on their business judgment in regard to paying a man \$700 for his services in connection with the dealers' show that originally was proposed, but later was called off. He also stated that the president and secretary of the association don't know much about automo-

biles, anyway, and the latter officer returned the compliment with a public statement to the effect that Hawkins had better attend to his business and not attempt to cast slurs on those who were residents of California when he was a "jay-hawking sewing machine agent in Texas." Another resignation came from A. B. Costigan, manager of the Pacific Motor Car Co.

Regardless of this dispute, the California Woman's Automobile Club seems to have made good with its show. It opened unofficially on Monday afternoon of last week, 2nd inst., with a big parade of decorated cars, headed by a brass band, two prizes being offered for the most attractive cars in line, with another lighted parade in the evening followed by the official opening in the big Coliseum, when Mrs. Fred J. Linz, president of the California Woman's Automobile Club ascended the platform and introduced Mayor Parker Lyons, of Fresno, as the inaugural speaker. The Mayor was followed by Wu Ting Fang, Chinese Minister to America, who complimented the women and said he was glad to see them succeed where men had failed, which statement was rather remarkable, coming as it did from the representative of a country where women always have been kept in the dark background. Minister Wu told of his experience of riding in an automobile in Washington five years ago and remarked at the progress made in automobile manufacture since that time. He caused laughter when he hoped some day to return to his own country in an automobile.

The women did not stop with two parades to advertise their show. By calling Monday night "Boulevard Night," when half of the proceeds were devoted to the boulevard fund that is being raised by the Automobile Club of California, they enlisted the help of that organization. To further stimulate interest in the show, a hill climbing contest was held during the afternoon on the steep hill that leads into the Buena Vista Park section. There were two classes for roadsters, with as many silver cups for prizes, and a large crowd witnessed the contest. Honors in the class for large machines fell to D. A. Bonney, who drove a Stearns up the bumpy stretch of more than a mile in 1:42. H. L. Ownesey, in a Winton, was second in 2:2034. In the class for smaller cars Edgar Mason, driving a Tourist, won the cup. Norman DeVaux, Auburn, was second, and Clarence King, Maxwell, had a walkover in the class for runabouts costing under \$900. On account of the bad condition of the hill Wednesday's events were postponed until Thursday when inclement weather again made them impossible. On Friday the rain caused a third postponement and from last reports it is doubtful if the events will be held.

While it is to be regretted that the differences relating to the automobile show occurred to disturb the peace of the dealers' association, at the same time it is not to be denied that the women did remarkably well in securing as many cars as they did. The Motor and Accessories Association sanctioned the show so that it did not make any difference in the accessories exhibits. At the Coliseum last week 33 makes of cars were staged, as follows:

White, Locomobile, Stevens-Duryea, Winton, Maxwell, Tourist, Acme, Aerocar, Frayer-Miller, Lambert, Auburn, Marion, Woods, Haynes, Chadwick, Dragon, Renault, Glide, National, Gale, Overland, Corbin, Elmore, Heine-Velox, Queen, Taximeter Cab, Brush, Jewel, Imperial, Jackson, Pennsylvania, Rapid and Stearns.

Fifteen agencies, representing nineteen cars, abided by the resolution of the asso-

RECORDS FALL ON FLORIDA BEACH

Cedrino Sheds Some Glory on the Carnival

—But Racers Were Few and Runaways the Rule.

The closing days of the Florida speed carnival, Thursday and Friday last, 5th and 6th insts., did nothing to pin its fame higher in the skies; and however strong the desire to make it appear otherwise it is evident, as it was stated last week, that the Florida beach meet has lost about all of its one time splendor.

by competing against these two drivers; he drove in the amateur race on Wednesday. The race was held over the full beach course of 16 miles, comprising eight laps at 32 miles each.

In the first lap Cedrino stopped to change a tire, and Bernin led at 32 miles in 25:27, Cedrino being then four minutes behind, with Kelsey two minutes behind him. In the second lap Cedrino regained the lead and held it from then until the finish. Bernin had a flat tire and changed it in the third lap and made a second change of tires in the fifth lap. Blakeley had trouble in the first lap and retired in the second. At 100 miles Cedrino's time was 1:21:39%,



TWO VIEWS OF THE CROWD ON THE BEACH

ciation and did not exhibit at the show. The cars which were not shown were:

Autocar, Buick, Cadillac, Packard, Cameron, Pullman, Ford, Mitchell, Northern, Peerless, Pierce Great Arrow, Pope-Hartford, Premier, Rambler, Reo, Stoddard-Dayton, Studebaker, Thomas and Oldsmobile.

Dealers After the Insurance Men.

Cincinnati's automobile dealers are after those insurance companies that prevented the dealers' association from holding its annual show last month by threatening to cancel the policies of the Music Hall if a show was permitted within the building. The association has appointed a committee to ascertain the names of the insurance companies who made threats of the sort, and to discover the cause thereof. The dealers will then see if there is any objection to holding the show in April and if the companies persist, the tradesmen say that they will cancel their insurance in any such companies. It is said that the dealers are backed up in their move by the Cincinnati Automobile Club, but whether or not this is the case there is no question but that. the dealers are in earnest in their endeavor to learn "what's what."

The only startling performance which occurred on Thursday, was a fast flight by Emanuel Cedrino, in a 60 horsepower Fiat car equipped with Continental tires, when he established a record of 256 miles by covering this distance in the race for the Automobile Club of America's trophy in 3 hours 21 minutes 273/5 seconds, an average of 77 miles per hour. The closing day saw Maurice Bernin break the 100 miles record by 3 minutes, when he won a match race against S. B. Stevens who, by the way, is classed as an amateur and as such drove in the gentleman amateurs' race two days previously, while Bernin is a paid professional driver. Bernin's time for the 100 miles was 1:12:561/5. So far as exciting sport goes there wasn't any. All the events were uninteresting runaways, and furnished none of the close finishes that have made other Ormond meets memorable.

The 256 miles race for cars weighing not more than 2,424 pounds for the Automobile Club of America trophy, which was run on Thursday, had only four contestants, Cedrino in the Fiat, Bernin in the 60 horse-power Renault, G. B. Blakeley in a 50 horse-power Christie, and R. G. Kelsey in another Christie. Kelsey professionalized himself

Bernin's 1:37:33%, and Kelsey's 1:38:27. When Bernin had his last tire trouble Kelsey passed him and although the young Frenchman made a fast run in the closing miles, he was just beat out for second place by twelve seconds. The following table shows the speed made by each of the three finishers on each lap:

		Cedrino.	Kelsey.	Bernin.
32	miles	 :29:16	31:15	25:37
64	miles	 54:14	1:01:58	55:22
96	miles	 1:18:46	1:34:54	1:33:38
		1:43:11	2:03:55	1:57:49
160	miles	 2:11:34	2:37:58	2:29:41
192	miles	 2:34:48	3:08:03	3:17:49
224	miles	 2:58:09	3:37:04	3:42:14
256	miles	 3:21:274/5	4:06:26	4:06:38

Driving at an average speed of 82.26 miles an hour Bernin, on a 60 horsepower Renault, won his 100 miles match against S. B. Stevens, in a Fiat, on Friday and broke the record for the distance. Bernin covered the century in 1:12:561/5; the old record of 1:15:401/4 was made by Walter Clifford-Earp two years ago.

The match was held over the full 16 miles course and Bernin had the better of the race from start to finish. At the 24th mile the Frenchman had a lead of 2 minutes 48 seconds over the gentleman amteur driv-



AT ONE OF THE TURNS OF THE COURSE-TYPICAL VIEW AT AN "EXCITING" MOMENT

er in the Italian car while he gained somewhat in the next leg. Stevens' time at the finish was 1:23:59, or 11 minutes 25 seconds behind Bernin.

The mile event from a rolling start resulted in a victory for Cedrino, who beat Bernin, the only other starter, to the finish by 100 yards. The time was 424 seconds, which was announced as a record for middleweight cars.

The mile record trials concluded the four days' program, and the record of 28\% seconds remained unscratched. The best performance in these trials was made by Cedrino, timed in 35 seconds, with Bernin second in 39\%. Kelsey in a Christic car was timed in 42\% in two trials and G. P. Parker, in a Benz car made it in 45\%. The summaries:

100 miles match between Maurice Bernin (60 horsepower Renault), and S. B. Stevens (60 horsepower Fiat)—Won by Bernin. Time, 1:12:561/5.

One mile open—Won by Cedrino (69 horsepower Fiat); second, Bernin (60 horsepower Renault). Time, 4215.

One mile record tri: ls—Cedrino, 60 horsepower Fiat), 0:35; Bernin 60 horsepower Renault), 0:39½; Kelsey, (50 horsepower Christie), 0:42½; Parker (80 horsepower Benz), 0:453/5. W. H. Wray, Jr., (14 horse-power Pengeot motorcycle), 463/5, flying start; 503/5, standing start.

Serving as a final wet blanket to the Ormond speed carnival, three, or maybe four,

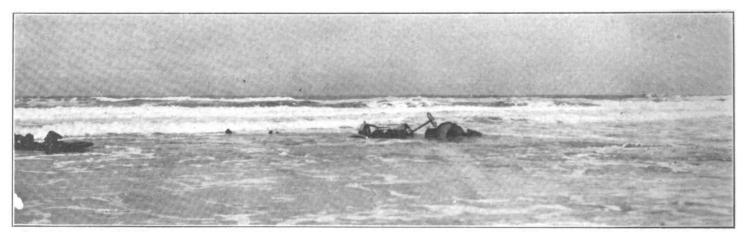


CEDRINO, THE HANDSOME RECORD BREAKER

or possibly five cars are making a run down the east coast of Florida from Jacksonville to Miami. It is called an endurance run. There are seven prizes. The distance is 371.8 miles. The run started on Monday and is supposed to finish to-morrow (Friday). The first day's run was from Jacksonville to Ormond, 84 miles, and of the unknown number that started only two cars arrived at that place, the Cadillac runabouts owned by Charles Nolan and Dr. Stinson, respectively. On Tuesday, Nolan's Cadillac and C. F. Wheeler's Peerless reached Rockledge, 74.5 miles, the cars arriving there within an hour of each other. Nothing has been heard of the other cars up to the present time.

World's Records on Brooklands Track.

Although it was thought that the staggering record set up on the Brooklands track a few weeks ago when Charles Jarrott covered 50 miles in 36:05 76-100, an average of 83 miles an hour, would stand for some time to come, it did not remain on the slate two weeks. On the 19th ult., Newton, driving a 60 horsepower Napier, set out to break the two hour record. Fifty miles were covered in 35:07 36-100, an average of 85.4 miles per hour, and the time for 100 miles was 1:10:20 31-100, averaging 85.3 miles. In the hour 85 miles 555 yards were covered. Newton's time for 150 miles was 1:46:06 17-100, and in two hours he had covered 169 miles 615.6 yards, a performance that clmost staggers belief.



WHAT HAPPENED TO ONE OF THE NON-CONTESTING CARS

RECORD BREAKING AT ALTADENA

Apperson Climbs Hill at a 52½-Miles Clip— , Derkum Gives a Sensational Motorcycle Performance.

Record breaking performances, a fast course, capable management and a big crowd, marked the third annual Pasadena-Altadena hill climbing contest held Saturday afternoon, 29th ult., by the Automobile Dealers' Association of Southern California. P. J. Q. Derkum, who broke several world's motorcycle records at a motorcycle meet in Los Angeles a week before, furnished the sensation of the day when he streaked up the hill in the marvelous time of 1 minute 17 seconds. This is at the rate of 65 miles an hour over a course measuring exactly 1.35 miles, and that rises from 3 to a 14 per cent, grade, besides containing three turns. The other sensation was the driving of Edgar Apperson, who drove two events in 1:361/4. This is at the rate of 521/2 miles an hour, the fastest time ever made over the course by an automobile, but somewhat slower than the record-breaking flight made by Derkum on a two-cylinder motorcycle.

The course was in excellent condition and probably five seconds faster than at previous contests. The work of the Altadena Improvement Association was manifest, and chuck holes were conspicuous by their absence. That bugbear of former contests-the electric railway crossingwas bridged by a wooden platform, which allowed the cars to cross at full speed without bounding off the ground as they formerly did. The ten events were run without a hitch of any kind and were disposed of in one hour and thirty-five minutes. The course was well patrolled and the deputies had no trouble in handling the crowd of 5,000 or 6.000 people that lined the high-

As only one car showed up for the first event it was scratched from the program and a special event for motorcycles was substituted, W. G. Collins and Paul J. Q. Derkum, both on two-cylinder Indians, appearing at the tape. This was the most sensational event of the day. Collins got the word first and was away like a shot, Derkum following fifteen seconds later. At the first turn Collins was obliged to make a wide detour and in doing so he grazed an automobile, his fingers getting a hard knock, while half of the handle bar was wrenched off. This did not seem to daunt him in the least and he continued with increasing speed. A few seconds later a similar experience befell Derkum. He also skidded on the turn and hit the fender of an automobile. According to Los Angeles advices one-half of the handle bar of his machine was torn off and his fingers were badly lacerated, but like Collins, he held his seat and continued to the finish, with

blood dripping freely from his hand. The result is shown in the summary. Both Collins and Derkum made the fastest flight ever witnessed over that upgrade from the gardens of Pasadena to the poppy fields of Altadena.

The last two were the most thrilling of the automobile events. Six of the fastest cars in Southern California lined up for the event for roadsters costing more than \$3,000. The Apperson, driven by Edgar Apperson, won easily in 1:361/4, with the Stearns second in 1:58. The last event was for the four cars that had made the fastest times in the previous events and was in the nature of a final heat to decide the real champion of the climb. It was unusual in that Apperson won again and duplicated his time made in the previous event to a fraction of a second. The Stearns was again second, but in better time than in the previous race.

All the events were closely contested. That for touring cars costing from \$1,000 to \$1,500 went to the Tourist in 2:41, and Leon T. Shettler's Kiselkar won in the class from \$1,501 to \$2,000. W. K. Cowan, Rambler, won a popular victory when he got the prize in the event for cars costing from \$2,001 to \$2,500. His time was 2:27. An Oldsmobile entered by the H. O. Harrison Co. took the next event in 2:25, while Shetler, in his Kisselkar pocketed another cup by driving up the hill in 2:2234 in the event for roadsters costing \$3,000 and under. The summary:

	For Motorcycles.	
1 2	Paul J. Q. Derkum, Indian W. G. Collins, Indian	1.17
	Touring Cars Costin \$1,000 to \$1,500.	g
1 2 3	Auto Vehicle Co., Tourist Leon T. Shettler. Reo Western Motor Car Co., Buick	2:41 2:54 2:56
	Touring Cars Costing \$1,501 to \$2,000.	g
1 2 3 4	Leon T. Shettler, Kisselkar H. O. Harrison Co., Oldsmobile Auto Vehicle Co., Tourist A. W. Gump, Jackson	2:461/4
	Touring Cars Costing \$2.001 to \$2,500.	g
1 2 3 4	W. K. Cowan, Rambler	2:27 2:35 3:04 3:55
	Touring Cars Costing \$2,501 to \$3,000.	3
1 2 3	H. O. Harrison Co., Oldsmobile Auto Vehicle Co., Tourist Western Motor Car Co., Thomas.	2:25 2:30½ 2:40½
	Touring Cars Costing \$3,001 to \$4,000.	g
1	Western Motor Car Co., Thomas. White Garage, White	4:371/2
	Roadsters Costing \$3,0 and Under.	00
2	Leon T. Shettler, Kisselkar Stoddard-Dayton Motor Car Co.	
3 4	Stodderd-Dayton	2:32¼ 2:41½ 2:58¼
	Roadsters Costing \$3,0 and Over.	0 1
1	Edgar Apperson, Apperson	1:361/4

2 W. J. Batchelder Co., Stearns	1:58
3 Ralph C. Hamlin, Franklin	2:00
4 Western Motor Car Co., Packard.	2:093/4
5 White Garage, Pope-Toledo	2:20
6 Woodill Auto Co., Haynes	
Special for Four Fastest in the Nine Events.	• -
1 Edgar Apperson, Apperson	1:361/4
2 W. J. Batchelder, Stearns	1:541/4
3 Ralph C. Hamlin, Franklin	1:5734
4 Western Motor Car Co., Packard.	2:12

The Message Delivered to Loughborough.

The message has been carried to Loughborough-Colonel Robert H. R. Loughborough, commander at Fort Leavenworth. Kansas. The message, which took the form of a letter of salutation from General Frederick Dent Grant, in command at Governor's Island, N. Y., was started from New York City on Tuesday, 18th ult., in an attempt to demonstrate the value of the automobile in carrying dispatches between army posts in time of war. In this case the message was carried in a 30 horsepower Studebaker, driven by relays of drivers. As has been detailed at length the car encountered heavy obstacles to its progress in the shape of huge snowdrifts between New York and Chicago, and after leaving the Windy City got into deep mud that was even worse than the snowdrifts. The further it went, the deeper became the mire and it was only by digging their way by inches for two days through two feet of heavy mud near Atchison, that the Studebaker crew managed to reach Fort Leavenworth at 11:32 o'clock Saturday morning last, 7th inst., having been exactly 18 days 2 hours and 32 minutes on the road. The entire garrison turned out to escort the mud covered car and its drivers into the

Hudson County Club Plans Active Work.

The Hudson County Automobile Club, which has its headquarters in Jersey City, N. J., held its annual meeting last week, at which it was decided to join any movement against unfavorable legislation at Trenton. The following officers were elected: President, J. V. Z. Anthony; vice-president, John P. Landrine; secretary-treasurer, F. D. Laughlin; directors, J. H. Edwards, H. P. Pond, Herbert Scott, E. M. Dixon, and Dr. L. A. Opdyke. The following committees were also appointed: Membership-H. P. Pond, Alfred H. Howe, E. P. Dixon; good roads, George E. Blakeslee, J. H. Edwards, William E. Smith; auditing, Herbert Scott, E. B. Kierstedt, Dr. W. L. Pyle.

Spokane Club Changes Name.

Henceforth the Spokane (Wash.) Automobile Club will be known as the Spokane Motor Club, the change in title being effected at the last meeting. Louis Schermerhorn was elected president and Dr. C. B. Setters was chosen vice-president. W. S. Dulmage received a majority of votes for secretary, but as he declined the office was left unfilled for the present.

JERSEY MOTORISTS SPOKE PLAINLY

Convention of Club Delegates Discusses
Proposed New Laws—Senator Frelinghuysen Replies to Questions.

Although some of the less hopeful individuals had prophesied that the presence of State Senator Joseph S. Frelinghuysen at the conference of delegates of the automobile clubs of New Jersey, relative to the iniquitous amendments to the present automobile law which the senator is endeavoring to have passed, held in Newark last Friday night, 6th inst., would have a tendency to make some of the delegates bashful and afraid to unburden their minds, such was not the case. Of the more than 300 representatives present each was eager to give Senator Frelinghuysen his opinion of the law and the proposed amendments.

The resolutions that were passed favored the law compelling all vehicles to carry a light at night, which is Senator Frelinghuysen's amendment to the good roads act and which, by the way, already had been passed by the Senate. His other measure amending the crimes act, making it a misdemeanor to throw glass or other sharp substances upon the highway, and also his efforts to compel justices of the peace to pay over to the States promptly all moneys collected in fines, were also commended and resolutions were passed accordingly.

Other parts of the amendments were opposed by the automobilists, who adopted resolutions favoring the extension of free tourist privileges to non-resident motorists; opposing the proposed license fee, and declaring for an increase of the speed limit to 30 miles an hour. Resolutions also were passed commending Commissioner J. B. R. Smith for his administration of the department of motor vehicles, and condemning the proposed plan to separate the department, and also one opposing a change in the dealers' license clause.

As is quite generally known, the amendments introduced by Senator Frelinghuysen consist of a sliding taxation of vehicles based upon horsepower, from \$3 to \$100 per year; a sliding scale for drivers' licenses, from \$1 to \$25; the granting "admission tickets" to non-resident motorists to use New Jersey's roads, at a cost of 50 cents per six days, and the abolition of manufacturers' and dealers' blanket licenses, besides several other minor changes.

W. C. Crosby of East Orange, N. J., opened the meeting and stated that it had been called to discuss the proposed amendments and to allow the originator of them to hear the automobilists' opinions. Each point in the proposed amendments was discussed at length and each of the eight resolutions were adopted unanimously.

Senator Frelinghuysen did not appear in the least disturbed by the criticisms, some

of which were extremely harsh. He joked with the automobilists and thanked them for their frankness. He was hailed as an automobilist and at the same time berated for his political ambition in playing for the farmers' vote, notwithstanding his insistence that politics should be eliminated from the question of motor vehicle legislation, and went on to explain that in framing the amendments he was actuated only by his idea of the need of the people at large, and that Governor Fort's suggestions were in accord with his own opinions.

After finishing his remarks, the Senator was asked by Dr. J. N. Faulkner, of the North Jersey Automobile Club of Paterson, if he had ever violated the 20 mile speed ordinance.

"I might ask the doctor the same question," responded the Senator.

"Answer mine first," retorted Faulkner.
"Never wilfully, and not knowingly," was the answer from the Senator, which was greeted with laughter. Dr. Faulkner's only answer was that he had heard that the father of the automobile law traveled faster than 20 miles an hour every time that he went out in his car. "He ought to know by this time," said the doctor, "that it would be impossible to keep within the limits."

Richard C. Jenkinson stated that the Newark Board of Trade was interested in the question from an industrial standpoint. He said that the automobile industry was of vital importance to the city and State from the fact that every part of a motor car was manufactured in Newark and that thousands of people were kept employed and added that although there were members of the Board who were opposed to automobiling, the organization was willing to take sides with the automobilists in their fight against unjust legislation. Mr. Jenkinson criticized the law which shut out tourists from other States which allow the Jerseyite the free privilege, but Senator Frelinghuysen did not explain how much he paid in taxes to the State of New York when he maintained an office in New York City and an uptown home and operated an automobile in New York when fighting so vigorously for the automobile law now in force in New Jersey. The Senator's letter heads at that time bore a New Jersey address, and appeared to be his chief qualification as a resident of that State.

Bingham Wants to Select Police Cars.

Commissioner Bingham, of the New 'York Police Department, is not so anxious as he once was to purchase motor cars at public letting. He desires to obtain two more of them at a cost of not to exceed \$8,000, and has asked the board of aldermen to permit him to buy them without advertising for bids. He says such action is necessary as the five passenger touring cars desired are "manufactured under patents." It is generally understood that the cars which the Police Department has been led to desire are Loziers.

RESURRECTION OF AN OLD BUGABOO

Outcry About Automobiles Damaging
Roads an Echo of Early Bicycle Days

— Page from History.

If, at this time, any person attempted to assert that the bicycle caused injury to the roads, probably he would be considered a candidate for an insane asylum. If the politicians are to be believed, it is only the automobiles that do damage to the highways. That this latter cry merely is in the nature of history repeating itself is well instanced by the reproduction of a letter which appeared in a Terre Haute (Ind.) paper in 1886, and which reflected the official opinion of that date, which was to the effect that the 50 pound bicycles of that period were destroying the roads exactly as the 5,000 pound automobiles of to-day are accused of doing. The letter in question, signed "Cyclist," was as follows:

"Editors Gazette-Yesterday's issue states among the "Court House Echoes," that the county commissioners have asked our county attorney for an opinion in regard to prohibiting bicycles from being used on the grade west of the river bridge, giving as their reasons that such bicycles are cutting up the splendid roadbed of said thoroughfare. The commissioners have evidently never been near enough to a bicycle to ascertain that a 'soft rubber tire' encircles the felloes of each wheel. In what manner that soft rubber can cut up a hard roadbed is as yet an unsolved mystery, which our worthy commissioners can probably explain best. It may just as well be claimed that one can cut plate glass with the end of their finger, with just as much plausibility.

"The commissioners could have saved Attorney Long the trouble of looking up the law on this subject, as scores of test cases have been tried before the courts in as many different localities and states, and (with but one single exception) the decisions have been to the effect that a bicycle is a 'carriage used as a means of conveyance, consequently is entitled to the same privileges and restrictions as other vehicles used on our public highways.'

"Not wishing in the least to question the sincerity of our commissioners in this matter, it has been left for them to be the 'first' to put forth this most ludicrously absurb plea of bicycles cutting up hard roadbeds; therefore they ask counsel if these bicycles can be kept off a certain road."

Warren Automobilists Form a Club.

Automobilists' of Warren, Ohio, have formed the Warren Automobile Club with the following officers: President, W. H. Dana; secretary, Harry J. Love; treasurer. Dan A. Geiger. The club will institute an active campaign for new members.

AMERICAN CAR AT BITTER CREEK

Its Long Lead in New York-Paris "Race"
Bitter for Europeans—Plan to Ship
the Cars is Forbidden.

With E. Linn Matthewson in the driver's seat, Edward Schuester at his side, and Captain Hansen in the passenger's seat, the Thomas car reached Bitter Creek, Wyoming, at 9 o'clock last night (Wednesday) on its way to Paris, having covered 2,300 miles from New York City. The Italian Zust car, in charge of Sirtori, was reported at Ogallalla, Neb., 1,878 miles, with the

the rear. This week an explanation was received from Paris. Since Godard left Paris, the report states, he has been sentenced to eight months' imprisonment and the repayment of 5,000 francs alleged to have been obtained under false pretence during the Pekin-Paris trip last year. On account of this Godard is in no burry to reach Paris.

The Thomas car has been making good progress since it left Cheyenne, Wyo., last week. At that place, Montague Roberts turned it over to E. Linn Matthewson, of Denver, who enjoys a reputation as a race driver. Montague Roberts, who piloted it that far returning to New York City, as he is entered in the Briarcliff trophy race in

moting the contest is "on the level." It was brief and to the point, and made it plain that the first car that took a railroad train would be disqualified. Naturally, it was a disappointed lot of foreigners that reluctantly set out after the American car far in the lead.

With the exception of the American entrant, all the other contestants have reported trouble. The De Dion car was laid up three days at Cedar Rapids with a broken crank shaft, and had more trouble at Marshalltown, a few miles further on. The Zust car broke a sprocket and a spring but was repaired in the Union Pacific shops at Omaha. The squabble that arose between the members of the German crew on the

THE MOTOR CAR AS AN AMPHIBIOUS CRAFT.



STREET SCENE IN DETROIT DURING A RECENT FLOOD

De Dion, St. Chaffray at the wheel, at Boone, Iowa, nearly a thousand miles behind the American car. The German Protos car, which is now in command of Lieutenant Koeppen, Knape and Maas having got their fine feathers ruffled and started back to Europe, was reported from Cedar Rapids, Iowa, 1,262 miles. Unfortunate Godard is laid up at DeKalb, Ill., with a broken sprocket. The Motobloc car, which was the only one equipped with solid tires, has been having all kinds of trouble over the rough western roads, and it is reported that Godard will equip his car with pneumatics before proceeding further. All the other cars are fitted with pneumatic tires, those on the leading Thomas being Diamonds

It has been remarked that Godard evidently has seemed in no hurry to cross the continent, being content to remain far in

April, and the Grand Prix in July. The Denver driver will take the car to San Francisco, when it will be given over to Schuester and Captain Hans Hansen, who as stated last week, forsook the De Dion crew and made arrangements with the Thomas company to pilot the American car through Siberia, which country is thoroughly familiar to him.

It developed this week that at least three of the foreigners had no intention of traveling all the way across the American continent by the power of their own cars. There existed, according to reports from Chicago, a sort of "gentleman's agreement" to ship the cars by rail to Seattle or San Francisto and then take the boat to Alaska, thereby starting from there on even terms. When this determination was cabled to Paris for confirmation the answer showed that at least the Parisian newspaper pro-

Protos car was of the same nature that separated St. Chaffrey and Hansen a week previously. Each wanted the credit of doing all the work, but as Lieutenant Koeppen was recognized as the leader of the party, having been commissioned by the German military authorities to take the car through to Paris, he got his name in the papers more often than did Knape and Maas. The latter two then "got their dander up" and are now on their way back to New York to return to Germany.

According to E. Leroy, Pelletier, who last week returned from abroad, the New York to Paris race, already a joke on this side of the water, is going to cause much sadness in Europe. It was expected to prove the immense superiority of the European cars, and to bolster the market for them on this side of the water. Unfortunately, the cars that were sent across to

make the run were built for the fine roads of Europe, and not for the ruts and trails of American wildernesses. Hence their utter failure. Mr. Pelletier spent three years in Alaska, and laughs at the idea of driving an automobile in that country.

Favors Automobiles for Newspaper Mail.

"There is one class of mail matter that should not be neglected and that cannot be neglected," declared Postmaster Morgan, of New York City, at the annual meeting of the New York State Association of Postmasters, held on Wednesday last, 5th inst. "That is the class which includes the newspapers and periodicals. As we deliver that mail now we have to depend upon wagons. It is my opinion that automobiles should be used. Whether the automobile can be relied upon for this service will be up to the department at Washington, but I believe that the automobile has reached a point of service that warrants its test as a factor in the postal service of the United States." Postmaster Morgan emphasized the fact that if the government does not authorize the use of automobiles for delivering newspapers and other bulky mail matter it will have to discover some other swifter means than by delivery with the slow-going horse and wagons.

Nixon's Dream of Rapid Travel.

It was a rosy view of the automobile's future that Lewis Nixon spread before the members of the Richmond County Automobile Club in his after dinner speech at their annual banquet at St. George, Staten Island, on Saturday night, 7th inst. "I predict," he said, "that in the near future automobiles will be an accompaniment of every home, the same as the old red wheeled buggy. The great department stores will have automobiles with bodies which may be removed from the chassis and another body placed thereon and no time lost."

Then Mr. Nixon proceeded to forget all about speed limits, especially in New Jersey, where scorchers encounter justice in its sternest aspect, for he added to his predictions the declaration that "in a short time cars will be built capable of making a speed of 175 miles an hour, so we may expect to travel from New York to Philadelphia in a few minutes."

Newark Already Talking of Next Show.

Because of the success of its recent show, the first of its kind held in Newark, N. J., the New Jersey Automobile Trade Association and the New Jersey Automobile and Motor Club already have begun to talk about holding a show in 1909. It was stated this week that arrangements already had been made to hold the next exhibition in the Essex Troop armory, which will be completed some time this year, the exhibition hall at Electric Park having proved by reason of its limited space entirely inadequate for the show which was held there this year.

THE MOTOR WORLD

TIRE MAKERS HANDLE TAXIMETERS

American Device Placed on the Market in a Combination Offer—Details of the New Appliance.

First of the American taximeters to be completed and put on the streets is the one made by the Westchester Appliance Co., which it transpires will be marketed through the Ajax-Grieb Rubber Co., of which Horace De Lisser is president. Announcement of this fact has served to bring



TAXIMETER WITH FLAG UP

out that the latter company is making a combination offer on tires and taximeters to owners and operators of taxicabs.

The first order reported is for 2,600 of the instruments at a fare of 50 cents a mile, with another order pending where the charge will be 30 cents for the first half mile, and 10 cents for each additional quarter mile, which is the prevailing rate in New York. On both of these orders there is a charge of 10 cents for each six minutes of waiting. The higher priced meter is to be for a company which figures on a service de luxe.



TAXIMETER WITH FLAG DOWN

The Westchester taximeter indicates the number of trips; the total cash for the day; the total number of miles covered and each individual fare. Moreover, by a unique device it is arranged that when there is any discussion regarding fare after the occupant leaves the cab, there is no chance of the driver allowing the fare to be running

up. This is accomplished by a further lowering of the flag.

The taximeter is made under patent No. 760,125, owned by the Taximeter and Cab Company of America, and the selling rights are controlled by the Ajax-Grieb Rubber Co. It will be handled by all branches of this company which has its New York head-quarters at Fifty-seventh street and Broadway.

The illustrations show two views of the taximeter reproduced from a complete instrument.

His Fine Came Back Fourfold.

Being fined \$20 for exceeding the speed limits and making a profit of \$60 by the adventure is not the experience of every automobilist. It did happen, however, to Richard Stevens Eskridge, a Seattle lawyer who was touring in Southern California. A motorcycle policeman started the story when he arrested Eskridge for speeding in the suburbs of Los Angeles. Eskridge fumed and swore, but to no avail. The officer was obdurate and the Seattle man was compelled to give bail for his appearance in court next day. Voicing maledictions upon the Los Angeles county officials Eskridge appeared in court the next day and had to leave \$20. He did not have the change, but threw down a \$50 bill and in exchange was released from custody and received a number of pieces of coin, including a \$10 gold piece. The gloom began to lift after that. Eskridge walked into a curio store to purchase a souvenir of his trip and after a selection laid down the \$10 gold piece in payment. The curio dealer examined the coin closely. Then he became interested. Inquiring the cause of the agitation Eskridge was told that the coin was dated 1849 and was one of the very rare coins minted in California. The talk ended when the dealer offered Eskridge \$80 for the coin. Eskridge figures that the \$20 paid for speeding his car was well invested.

Big Roundup of Scorchers.

Donning plain clothes, New York City's motorcycle and bicycle police force, went out for a "killing" an Thursday last, 5th inst. As a result of the hunt 61 chauffeurs were bagged, most of whom were bound over for trial in Special Sessions. The only driver let go was Dr. Joseph A. Mulholland, who explained that he was trying to beat the stork when arrested. Magistrate Breen thought the arrest of the doctor was rather one-sided as the stork had not been arrested also, so he let Dr. Mulholland go.

Royalty Blows the Gabriel Horn.

If it were located on "the other side," the Gabriel Horn Mfg. Co., Cleveland, O., would be able to adorn its stationery with a whole row of royal crests. According to their advices, the Gabriel horn has found its way into the royal garages of the United Kingdom, Germany, Prussia, Spain, Italy and Russia.



FOR TESTING COIL PERFORMANCES

Heinze Describes His Apparatus at Boston Meeting of Engineers—How It Determines Ignition Requirements.

To the average motorist, as, indeed, to many a self-styled expert, the ignition system of the modern car is an all but impenetrable mystery. Hence the average individual with the troubles of his own which, happily are fast vanishing with each year's improvements, is not properly equipped to appreciate the difficulties which beset the path of the manufacturer of ignition devices. The nature of these difficulties and some of the methods which are employed in overcoming them are set forth in a paper read by J. O. Heinze before the Society of Automobile Engineers at its Boston meeting this week.

Speaking of the ideal requirements for igniting the charge in the internal combustion motor, the author remarks that "what is needed is a very hot spark, of great frequency, positive, and of a certain length, to penetrate the gap in the spark plug which is generally from 1-64 to 1-32 inch." As the compression is increased, it is necessary further that "the spark should be longer and of a higher voltage, or to be more precise, it requires a good ½ inch spark to jump a 1-32 inch gap at 90 pounds compression, and only a ¼ inch spark at 60 pounds.

"The heat of the spark depends entirely upon the watt energy consumed in the arc of the gap, or in other words, the sum of the voltage multiplied by the amperage passing through and across the spark gap,' he continues. "But since the voltage across the spark gap becomes practically nothing after the resistance of the gap is broken down and the arc formed, the amperage then depends entirely upon the ohmic resistance of the secondary of the coil and the total energy induced in the secondary, and this energy again depends upon the mass and quality of iron in the primary, the ampere turns on the primary core, producing a certain total magnetic flux and the rapidity with which the primary current is interrupted, and from this analysis it would appear that the larger the iron core, or the larger the coil, the hotter the spark to be obtained. Quite true, but we must figure on the frequency of the spark necessary to operate an engine at high speeds, and here we meet with a limitation in the size of spark coils practical for gas engines.

"We find that we have got to magnetize and demagnetize the primary iron core to produce an induced current in the secondary and as the iron core and its vibrator have a fixed time lag, depending upon the mass of iron in the core, the mass of the vibrator and the length and tension of the vibrator spring, we can therefore produce only a certain number of sparks per minute in a certain size coil, as a certain frequency is necessary for a definite engine speed. This frequency would then determine the size of the coil, and the size of the coil determines

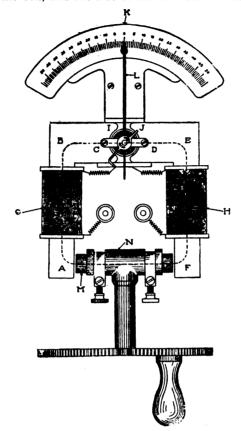


FIG. 1-HYSTERESIS TESTER

the total electrical energy which can be produced by it in the heat of the spark."

With a magneto, as he explains, no such limitations exist. Furthermore, he states the opinion, based on experience, that the "spark coil using a vibrator operated by either a battery, magneto, or small electric generator, will never produce the same results, or efficiency, produced by a magneto operating through a mechanical electrical make and break in the cylinder or on the magneto and stepping up the voltage for jump spark ignition through a non-vibrating induction coil."

For the purpose of studying the requirements of the automobile ignition coil, as well as of testing the efficiency of various kinds of coils, the author has contrived

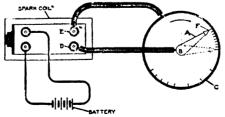


FIG. 2-FREQUENCY INDICATOR

and employed several forms of special apparatus. Of that shown in Fig. 1, he says: "For the purpose of testing the magnetic quality of the iron and its ability to quickly

magnetize and demagnetize, I designed . . . a 'hysteresis tester,' which consists of an iron core, A, B, C, D, E, F, of U-shape. On the cores A, B, and E, F, are wound small coils G and H, and between the pole pieces, I and J, is mounted a small circular iron core. Around this core moves a small coil of wire pivotly mounted to which is fixed an indicating needle, L, moving over a graduated scale, K. Small non-magnetic clock springs are secured to the coil pivot and keep the needle at zero. A direct current from a battery producing a certain number of milliamperes passes through the moving coil on its pivot and through the coils G and H in series. The iron core, M, of the spark coils to be tested is revolubly mounted between the cores A and F and completes the magnetic circuit

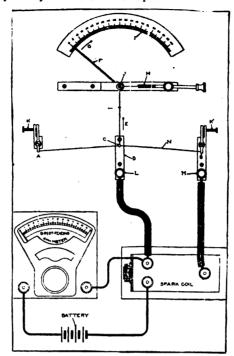
"If we now pass a certain number of milli-amperes through the coils G and H and the pivot coil, the iron core to be tested remaining stationary in the position shown in the diagram, we then get a certain deflection of the needle, L, over the dial, K. If we now rotate the iron core, M, about its axis at a fixed number of revolutions we then get a new reading on the scale. The magnetism generated by the current in coils G and H and passing through the rotating iron core in the direction as indicated by the dotted line, reverses in direction through the rotating core twice during every revolution. If we now rotate this core 2,000 revolutions per minute we would get 4,000 reversals of magnetism. The number of degrees of deflection of the needle on the scale depends upon the strength of the magnetic field, and if the iron core does not readily demagnetize and magnetize during its revolutions it would naturally reduce the total strength of the magnetic field and the indicator would show a small reading on the scale. So by this method we can show absolutely whether an iron core is susceptible to rapid magnetic changes necessary for producing a coil to give a great frequency of sparks per minute, and for the purpose of seeing that our iron is twice alike, for if it is not, repeated annealing will usually make it so.

"To test the frequency of the sparks from a coil I designed the instrument shown in Fig. 2, which consists of a rotating needle A, on its axis, B, within a graduated ring.C. of a known diameter and divisions. One end of the secondary, D, of the coil connects to the rotating needle, A, and the other end of the secondary, E, connects to the ring, C. The needle, Λ , at its point, F, is separated 1/4 inch from the ring, C, so that sparks leap across this gap from the point, F, to the ring. If we now rotate the needle a certain number of revolutions and we have a certain circumference in the ring, by multiplying the number of the sparks per inch, times the number of inches in the circumference of the ring, times the number of revolutions of the needle, we then get the number of sparks per minute.

"Fig. 3 is an instrument for measuring the approximate temperature of the spark of different spark coils and magnetos. This is not determined in Fahrenheit degrees, but in heat units. The instrument is designed on the principle of utilizing the expansive effect of a hot wire to move an indicator needle over a graduated dial, and is constructed as follows: A fine copper wire is stretched between the metal contact posts, A and B, the tension of this wire being regulated by the adjusting screws, K, and K'. To the center of the wire at C, is fastened a small copper stud which comes to within 1-32 inch of the metal plate D. The secondary terminals of the spark coil are connected to the binding posts L and M, completing its electrical circuit through the copper wire N, across the gap at C, to plate D.

"If a certain amount of primary current, determined by an accurate ammeter, is passed through the coil, we will get a continuous secondary spark between the stud C, and the plate D. This spark heats the stud and in turn heats, the copper wire which expands and causes an elongation in the direction of the arrow E. To the center of the wire and the stud, C, is also fastened a small wire, to the end of which is fastened a silk thread, wound around a pivot and kept taut by a small spring, H. To the pivot is fastened an indicator needle moving over a dial, I, in the direction of the arrow, G, when the wire is expanding, and in the opposite direction when contracting, giving us a certain reading depending entirely upon the temperature produced in the copper wire by the heat of the spark at the gap, C. When the rate of cooling, or radiation, of the wire equals the production of heat from the secondary current, the needle will then come to a stop and no fixed time measurement is necessary. In order to test various coils, it is first necessary to see that they all consume the same amount of primary current at the same voltage. . . .

"Fig. 4 is an instrument for measuring the amount of lag in the secondary spark from the moment the primary current is closed, and my object in designing this instrument was to clear up a prevailing idea in the minds of many automobile operators, that by advancing the timer an early ignition is produced when the piston is still coming up. From the many experiments which I made in ignition timing, I found that it was impossible to advance the spark more than 10 degrees at an engine speed of 1,000 r.p.m. without observing a slight decrease in power; if the advance was carried further, the engine would gradually come to a stop, or kick back. The higher the engine speed the more the spark can be advanced, but no such advance is possible as would be indicated by the position of a timer apparently capable of a movement of 90 degrees, or more. This great amount of advance of the timer is necessary to overcome the enormous lag in vibrating spark coils, but no such advance is possible with a magneto, for the secondary spark takes place immediately at the moment of the primary current interruption. The only



PIG. 3-HOT WIRE PYROMETER

lag present is entirely magnetic, and there is none in the contact, for the mechanically operated contact breaker in a magneto increases in speed with the engine, but the vibrator of a coil has a fixed lag, or in other words takes just as long to start vibrating, whether the engine is running 100, or 2,000 revolutions and it should respond more rapidly at high speeds than at low, but it is apparently impossible to make such a magnetically operated make and break in the form of a vibrator.

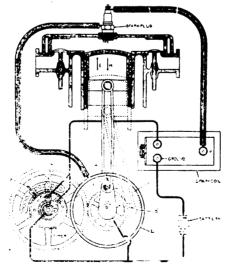


FIG. 4-TESTER FOR IGNITION ADVANCE

"The instrument for demonstrating this advance spark theory consists of a model of a gas engine with its cylinder and piston, connecting rod and crank, but secured to the crank pin is a small pointer, K, which

rotates within a metal ring, L, clearing it about 1/4 inch. The wires from the secondary of the spark coil are connected to the insulated metal ring, L, and to the crank and pointer, K, so that the spark will jump from the pointer K, to the ring L, while the engine is in operation. We now set the timer in such a position that in turning over the engine slowly by hand in the direction shown by the dotted lined crank, we will get a spark when the crank is at the point of maximum compression, as shown in the diagram. If the engine is now speeded to 1,000 r.p.m., without moving the timer, we would find the spark jumping across at B, or in other words, it would be 90 degrees late. This lateness of the spark is entirely due to the lag of the vibrator and the magnetic lag of the iron core, and we must advance the timer an equivalent amount to balance up the two. By varying the speed of the engine, the spark moves from the position A' to B'. My object in designing this instrument was to prove that the ignition in a gas engine should take place at the highest point of compression, and it approximately does so when the engine develops its greatest power, also that the time required to ignite the charge is very small and never requires more than a few degrees of advance."

Effect of Bad Weather on Sales.

"You would hardly expect weather conditions to have any material bearing on the sale of a car, yet in many a case it has been my experience that an unexpected 'bad' day has ruined my chances of a sale which otherwise might have been almost a foregone conclustion," says a New York salesman of no small experience in such matters. "It is not as you might at first suppose, that bad weather makes bad roads, and bad roads interfere with the smooth demonstration we always used to be so crazy to give the 'prospect.' The fact of the matter is that when we get hold of one of those pestiferous 'doubting Thomases' who never can quite make up their minds between the respective merits of the Nile or the Congo cars, we always dread a rainy or snowy day. For just as sure as one comes, some 'friend' will get hold of him and point out the advantages of some other machine. Whereas if it is pleasant, we can generally swing him our way."

San Francisco Dealers Schedule Tests.

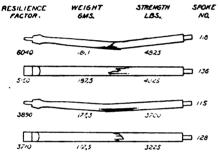
At its meeting last week the Automobile Dealers' Association, of San Francisco, decided to hold a hill climbing contest in or near the city on April 11th, a two days' endurance run around the bay district on May 30th, and a four days' reliability run to Los Angeles from September 6th to 9th, inclusive. Eight new members were admitted as follows: The Pope Agency, Continental Tire Agency, G & J Tire Co., Morgan & Wright, C. F. Splitdorf, Prest-O-Lite Co., Fisk Rubber Co., and the Autocar Co.

RED HICKORY PROVES ITS VALUE

Officially Tested Together with the White Variety—Important Error Found in System of Grading.

No small amount of anxiety is being felt in the ranks of carriage and wagon builders owing to the rapid depletion of the forests. In this connection recent tests carried out by the Forest Service of the United States Department of Agriculture with the co-operation of the National Wagon Manufacturers' Association of America, the Carriage Builders' National Association, and the National Hickory Association at the laboratories of Perdue University, are particularly interesting.

As a matter of fact, it was demonstrated that the present grading system involves



HICKORY SPOKES AFTER TEST-GRADE A

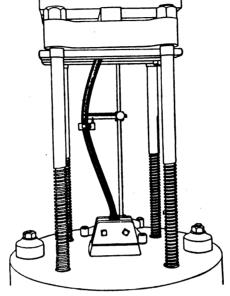
an error of more than 50 per cent, due largely to "the traditional prejudice and consequent discrimination against red hick-ory." Incidentally, the experiments afforded a most convincing demonstration of the value of laboratory tests in conjunction with the selection of woods for the work of vehicle construction.

The particular bearing of these trials upon the automobile industry is found in the investigations applied to the selection and trial of spokes. These trials, while applied only to spokes such as are used for light buggy construction, are particularly suggestive, as showing that the supply of available material is actually less limited than commonly is believed.

The direct object was to test the correctness of the present system of grading hickory buggy spokes and to ascertain the relative strength and toughness of red and white spokes. To this end 500 sample spokes were procured and were graded at the factory by experienced foremen, the grades being packed separately in the usual order, A-white, B-white, C-white, C-red, C-mixed, etc. The spokes were tested in the manner indicated in a general way by the accompanying figure.

The spokes, which were of 1-inch size, were cut to 21 inches in length, were tenoned on the rim end, and the tenon was inserted in a hole in an iron block clamped to the movable head of the testing machine.

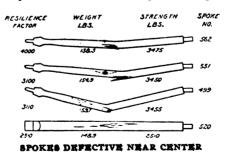
The heel of the spoke fitted into a second block resting on the platform of the testing machine. With the spoke mounted in this fashion it represented a column with the rim and hub ends held in the same manner as in a wheel. The amount of bending or transverse deflection at the center was shown by a pointer attached to the



TESTING MACHINE IN MOTION

spoke, and arranged to move over a horizontal graduated scale. During the test the load at the first visible failure and the maximum load were noted, together with the corresponding deflections at the center, and in each case the test was continued until the spoke had reached a deflection of 2 inches at the center. All spokes were thus subjected to the same conditions.

The factor representing the value of a spoke should include both strength and toughness. The greatest load held up by a spoke is a measure of its strength, and the amount of bending in a spoke when the first crack occurs is a measure of its toughness. The product of these two quantities gives

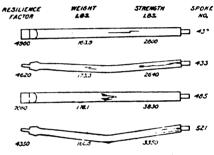


a factor representing both strength and toughness. It is called the resilience factor. The various factors measured or computed in the tests were thus; the weight of the spoke; maximum load, that is greatest load sustained by the spoke; deflection in inches, at maximum load and at first failure, or amount of bending at the center under the maximum load and at the time of first failure; and the resilience factor, or

the product of the maximum load multiplied by the deflection at first failure.

From the general results obtained, it appears that the average weight and the average resilience factors of the A-white spokes were both considerably higher than in the other grades. A wide range between the maximum and minimum value for the resilience factor in any grade is noticeable, showing that the quality of the spokes varied in each grade. For instance, it is observable that the C-red spokes have a higher resiliency than either the C-mixed or the C-white. In the same way the D-red spokes have a higher resilience factor than the D-mixed or E-white.

In the first of the accompanying figures typical fractures are shown, together with the observations pertaining to the spoke under test in each case. Only clear spokes were used in this portion of the investigation. In the two succeeding figures, are shown the results of tests upon flawed



SPOKES DEFECTIVE NEAR END

spokes, with weaknesses at the ends and near the center, respectively, and illustrating the relative importance of such flaws, when the spokes are subjected to radial load.

It should be observed that in these trials no account was taken of the tangential strain thrown upon the spokes of the automobile driving wheels, which is in some cases very high, and would naturally tend to accentuate the deflection caused by the radial load.

Of defective spokes, the official report of the foregoing tests observes that five general classifications are commonly to be found, namely: "Iron streaks, bird pecks, cross grain, knots, and wormholes. A spoke containing a wormhole is dangerous, as it is impossible to tell to what an extent the spoke has been bored on the inside. Iron streaks are supposed to be caused by the infiltration of foreign coloring matter through bird pecks. Iron streaks and bird pecks, when they show only slightly, apparently do not affect the mechanical qualities of a spoke.

"Spokes failing from crossgrain generally break in two pieces. Defects, such as knots, have greater weakening effect when near the center than when near the ends.

The lower resilience factor in the spokes with defects near the center is noticeable.

"The spoke tests definitely show three

things: (1) That the present system of grading buggy spokes does not correspond to their strength and toughness; (2) that the factor denoting the strength and toughness of clear spokes varies directly with the weight, and (3) that red, white, or mixed spokes of equal weight have practically the same resilience factor."

Rapid Transit for Tennessee Towns.

That opponents to the introduction of gasolene motor cars on railroads are to be likened to the people who opposed the original introduction of the steam locomotive, was declared by the Wisconsin Railroad Rate Commission in a decision made last week in dismissing the complaint of citizens of Madison and Monroe, Wis. The complaint declared that the motor car installed in service by the Illinois Central between Madison and Freeport is dangerous and inadequate as a means of transportation.

The commission declared that this car, which is being adopted by the Union Pacific, Northwestern and other roads on branch and poorly patronized lines, is a mark of a distinct epoch in railroad transportation and will result in economy for railroads and greater benefit to the traveling public.

The commission recalls that when the English parliament was debating a charter for the first English steam railway, strenuous objections were raised and it was claimed that the smoke of the locomotive would blight vegetation, the railway would depress land values and the health of the people would be destroyed; that even hens would cease to lay eggs and that it would be better for the people to stick to the stage coaches and canal boats. The commission recalls that the health question involved in the first railway in Germany was submitted to a then eminent medical authority, who declared that not only would the travelers be stricken, but the onlookers would get a disease which he named delirium furiosum.

The result of the decision is that railway gasolene motor cars will be encouraged in Wisconsin.

Railroad Board Favors Motor Cars.

Residents of Murfreesboro and Woodbury, Tenn., are organizing a stock company which, when formed, will purchase a 30 horsepower automobile with a seating capacity of twelve, and run a rapid transit line between these cities. The car will make two trips a day, and if the venture proves profitable, additional cars will be installed.

Stage Line for Atlanta Suburbs.

The Motor Omnibus Co., with \$40,000 capital, has been formed in Atlanta, Ga., for the purpose of conducting a stage line between Atlanta, Roswell, Dehlenega and Gainesville. Herbert R. Brown of Macon, and Judge S. S. Yoder, of Washington, are named in the papers.

THE MOTOR WORLD

WILL IT BE T-A-X-A- OR T-A-X-I-?

Both Forms in Use and the Question Up to Dictionary Makers—Popular Preference May Decide.

"T-a-x-a- or T-a-x-i-?"

This question has already started the makers of dictionaries, as well as the people who use this fare measuring device, thinking. One of the cab companies, the New York Transportation Co., holds to the former spelling, the other, the Taxicab Co., uses the "i."

The dictionary folk have their own opinion as to how they would have made the word if they had been called in at the start, but are not so certain what form the public will decide on, and which will receive the final authority of the printed dictionaries when the new word is inserted, as it is sure to be as soon as publishers begin to revise editions.

Dr. Charles P. G. Scott, etymological editor of the Century Magazine, when asked for his opinion as to the two forms, "taxameter" and "taximeter," said:

"While it is impossible to decide absolutely what the dictionaries will do in the matter, one thing is certain, that etymological analogy favors 'taximeter' rather than 'taxameter.' At best, both of these words are etymologically inexact. They are made up of the root of 'tax,' comes from the Latin, and of 'meter,' which comes from the Greek. Some persons evidently consider that they are using the English noun 'tax,' or the French noun, 'taxe.' The Latin analogy of words of this kind requires 'i' as the connective vowel. If the Greek analogy were to be followed 'o' would be used, as in "thermometer,' and the business form, 'gasometer.' Those who have written the word 'taxameter' have, apparently, followed the analogy of 'hexameter, 'pentameter,' and the like; but these words are really irrelevant and the 'a' there has a different origin. Or they have assumed that the word is formed from a modern Latin noun, 'taxa,' answering to the French 'taxe' or Italian 'tassa,' from the Latin verb 'taxare,' and have, therefore, considered that the proper connective is 'a': but, etymologically, there is no question that 'taximeter' is more correct.

"But words often get into the dictionary for other reasons than etymological exactness. One of these reasons is popular acceptance; and popular acceptance is governed by a number of accidents.

"In the case of the cab devices in question, newspapers and magazines might spell it 'taxameter,' and this spelling might be generally adopted. If it happened that the company which introduced the device in New York ran the largest number of cabs with a 'taxameter' upon them, the largest number of people would become

familiar with this spelling, and it would, by rule of majority, gain precedence. In this case, although the dictionary men might not like it, they would put it down as the first spelling, and add, 'Also spelled "taximeter," with a note stating that this is the more correct form, etymologically.

"Then, again, the rule of priority might have to be considered. In botanical and zoological terms it is agreed that the spelling used by the first describer of the thing named shall, unless it be entirely ridiculous, be accepted in order to avoid scientific confusion and useless discussion. If the first maker of such a device spelled it with an 'a' (taxameter), this would have to be taken into consideration by the dictionary men.

"The question of legal adoption might have to be considered. If, for example, the board of aldermen should pass an ordinance in which the spelling 'taxameter' appeared, that spelling might prevail. The proceedings of aldermen always excite profound attention. The spelling in the papers of the original patent also would have an influence.

"The spelling 'taxameter' has one thing in its favor. It is stronger in sound than 'taximeter,' which has a weak stressed vowel in it.

"The pronunciation of the word also must be settled. Shall the stress be a single one, on the second syllable, or shall there be a double stress, one on the first syllable and another on the third? The conventional rule would require the single accent on the second syllable, but it is a good custom in English, in four syllable words, to use two stresses, which make the word easier to pronounce and easier to hear. Moreover, there is a tendency in compound words of this sort, where there are two elements each of which carries a distinct meaning, to separate them by stress, almost as if they were two distinct words. We speak of a kil-o-meter, rather than a kil-om-eter, although the rule requires kil-om-eter, like therm-om-eter, etc. It is possible, therefore, that tax-a-meter or tax-i-meter will become the established pronounciation rather than tax-am-eter."

At the office of the New York Transportation Co., R. W. Meade, the president, said:

"We use the spelling 'taxameter' for historical reasons largely, and because the patent papers on the device in Germany and the United States have this spelling for the Kosmos device which we employ. It, therefore, has a legal recognition and I am informed by editors of dictionaries that legal use of a word sometimes determines its acceptance, apart from questions as to its form. Moreover, this device received its first great development with German inventors who first employed a combination of 'tax' and 'meter' to designate. And the maker of the first German device spoke of it as a taxameter. We have, therefore, simply used the legal name of the mechanism we employ."

Waste Not—Want Not

There isn't any waste to Eutofoid. There's much waste in cutting up leather.

The difference between buying just what you can use instead of buying irregular shaped hides, only part of which you can use, is an economical reason for buying Eutofoid.

Another reason is that it's better than leather.

Autofoid is a duplication, not an imitation, of <u>perfect</u> leather—but it's uniform. Leather isn't.

Elutofoid is the best known material for tops, cushions, etc.

The American Leatherette Mfg. Co., Rew York

MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

Nothing can win approval without merit



Splitdorf Ignition

Has Attained National Repute Because of Unquestioned Merit

The confidence in SPLITDORF Ignition that has made this business the greatest of its kind is rooted in Splitdorf quality.

C. F. SPLITDORF
Walton Ave. & 138th St. NEW YORK

"RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

TRONG-DURABLE
CALELESS-RUSTLESS
MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY. CANTON, OHIO

The Week's Patents.

876,164. Automatic Controller for the Speed of Autovehicles. Thomas B. Ford, New York, N. Y. Filed March 28, 1906. Serial No. 308.487.

1. An automatic controller for the speed of auto vehicles comprising the motor, the traction wheels, and a shifting device having a pneumatic actuator controlled by the combined action of the motor, running at a uniform rate of speed, and the driven traction wheels running at a verying rate of speed.

876,355. Transmission Gear. William S. Hovey, Three Rivers, Mich., assignor to Sheffield Car Company, Three Rivers, Mich. Filed April 29, 1907. Serial No. 370,848.

1. The combination of a driving shaft; a gear revolubly mounted thereon; a bevel gear secured thereto; a clutch for securing said gear to said driving shaft; a transmission shaft arranged parallel with said driving shaft; a gear revolubly mounted thereon arranged to mesh with said gear on said driving shaft; a clutch mechanism for securing said gear to said transmission shaft; connections for said clutches whereby, when one is in engagement, the other is released; driving connections for said driving and transmission shafts adapted to be connected or disconnected as desired; a driven shaft arranged transversely of said driving shaft, and driving connections to said bevel gear for the purpose specified.

876,406. Motor Vehicle. James C. Simonson, Rockford, Ill. Filed March 13, 1907. Serial No. 362,213.

1. In a motor vehicle the combination of the platform thereof, a truck supporting one end of the platform and connected thereto about midway of its length, supporting wheels connected to one end of the truck, an axle pivotally connected to the other end of the truck on a horizontal pivot, and supporting wheels connected to the pivoted axle.

876,460. Starting Mechanism for Internal Combustion Engines. Howard A. Johnston, Toronto, Ontario, Canada. Filed Feb. 11, 1907. Serial No. 356,739.

1. In an internal combustion motor the

THE MOTOR WORLD

combination of a storage air tank; a second tank; a pipe connecting the two; a stop cock in said pipe; a pipe connecting the second tank with the cylinder of the engine; a pressure limiting valve in said pipe; and a stop cock between the pressure limiting valve and the second tank, substantially as described.

876,475. Emergency Brake for Motor Vehicles. Alexander D. Morgan, West Roxbury, Mass. Filed Feb. 1, 1907. Serial No. 355,226.

1. The combination with a vehicle, of an emergency brake comprising a frame pivotally attached to said vehicle, a drag pivotally attached to said frame by a substantially vertically arranged pin and maintained substantially parallel to the rear axle of said vehicle, and means under the control of the driver for lowering said frame whereby said drag is brought into contact with the roadway over which said vehicle is traveling.

876,501. Differential Gear. Peter Steinhauer, St. Louis, Mo. Filed July 15, 1907. Serial No. 383,823.

1. A differential gear for vehicles comprising a shaft, wheels loosely mounted at the opposite ends thereof, a rotatable member encompassing the shaft between the wheels, an inner toothed gear carried by each wheel, a gear wheel secured to the shaft adjacent to each wheel, a series of pinions rotatable about their axes carried by the rotatable member adjacent to one of the wheels and meshing with the gear wheel on the shaft and with the gear on the wheel, a series of pinions rotatable about their axes carried by the rotatable member adjacent to the opposite wheel and meshing with the gear wheel, a second series of rotating pinions likewise carried by the rotatable member adjacent to said opposite wheel, said second series being disposed to one side of the first series and along radial lines; concentric with the radial lines of disposition of the first series but at different distance from the common center of said radial lines, said second series meshing with the first series of pinions and with the adjacent gear wheel secured to the shaft, substantially as set forth.

876,582. Inlet Valve Mechanism for Explosion Engines. William Ottaway, Au-

rora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed March 7, 1906 Serial No. 304,725.

1. In an explosive engine, the combination with the cylinder thereof provided with a valve opening and with an annular casing seat surrounding said opening, of a valve casing or shell having at its inner end an annular bearing surface fitting said casing seat, and an opening at its outer end, and clamping means embracing a clamping member which is connected with the cylinder inside of the said casing, and a nut having screw threaded engagement with said clamping member and which bears against the outer end of the said shell or casing to clamp the same against said casing seat.

876,645. Spring Cushioned Tire. Isaac Hodgson, Minneapolis, Minn., assignor to The Automatic Wheel & Rim Co., Minneapolis, Minn., a Corporation of New Jersey. Filed March 16, 1906. Serial No. 306,366.

1. The combination with a wheel rim, of armor plates applied thereto and extending circumferentially outward thereof. a yielding tension band made up of a multiplicity of pliable folds working between and having frictional engagement with the inner surfaces of both of said armor plates, radially disposed circumferentially spaced coiled springs interposed between said rim and said tension band, and tread devices applied to the exterior of said yielding tension band, substantially as described.

876,768. Extension Top or Canopy for Vehicles. Albert L. Bowen, Worcester, Mass., assignor to Charles K. Pevey, Worcester, Mass. Filed June 20, 1907. Serial No. 379,962.

1. A canopy frame for vehicles comprising a rear section and a front extensible section, each having an upright bow, a pair of short bows pivotally mounted on said upright bows and having their upper horizontal portions hinged together, and flexible connections between the short bow pivoted to the rear upright bow and said rear upright bow for the purpose specified.

876,769. Motor for Automobiles. Ralph



R. Brown, Livermore, Cal. Filed May 6, 1907. Serial No. 372,023.

1. In a device of the class described, a shaft or axle, a turbine mounted thereon and having radial blades, a casing inclosing the turbine and having oppositely disposed valve chests communicating with the interior of the casing through oppositely extending ports, a duct connecting the valve chests, slide valves mounted for reciprocation in the chests and governing the passage of steam through the ports, said valves being provided with stems extending through the ends of the chests, suitably guided flexible elements connected with the valve stems to effect movement of the valves in opposite directions, and means for supplying motive fluid to one of the valve chests.

876,800. Carburetter. Emil Gundelach New York, N. Y., assignor of one-half to Robert J. Ehlers, New York, N. Y. Filed June 18, 1906. Serial No. 322,285.

1. A carburetter comprising a casing composed of a central, a top and a bottom section, said top section being rotatable upon the central section and provided with outlets for communicating with the working chamber of the engine, said central section being provided with a mixing chamber whose walls are spaced apart from the wall of the section, and with an oil reservoir provided with a supply pipe below the mixing chamber, and a central inlet from the bottom section to the mixing chamber, a spraying device within the inlet, said device comprising a pipe extending through the bottom section and communicating with the reservoir, the outer end of said pipe being screw threaded, a nut engaging said end for retaining the bottom section in place, and a tube within the pipe and provided with a nozzle, said nozzle co-acting with the open end of the pipe to form a contracted opening through which the liquid is sprayed, said tube having openings in the sides thereof and provided with a valve at its outer end, a float valve controlling the supply pipe of the reservoir, said bottom section being provided with an air inlet, a valve controlling the inlet, said valve having a stem projecting through the opposite side of the bottom section from the air inlet, a spring normally seating the valve, means for regulating the tension of the spring, and a fan for forcing air through the inlet.

876,826. Wheel Tire. Thomas J. McCarthy, Los Angeles, Cal. Filed Aug. 24, 1906. Serial No. 331,915.

1. The combination with a wheel and a separate tire, of radial springs pivotally anchored at both ends therebetween, and similarly anchored quasi tangential springs alternately running in opposite directions at

each side of the radial springs and crossing one another longitudinally of the tire and wheel rim.

876,847. Friction Transmission Gear. George T. Stamm, Los Angeles, Cal. Filed March 18, 1907. Serial No. 363,119.

1. In a motor vehicle, in combination with the side frame members of the vehicle, intermediate friction wheels carried by the side frame members, a driving shaft, a driving friction disc carried by the driving shaft, a driven shaft, a driven friction wheel on the driven shaft, and means for moving the driving friction disc against the intermediate friction wheels and simultaneously bending the side frame members of the vehicle to move the intermediate friction wheels against the driven friction wheel.

876,878. Explosive Engine. William H. Hooper and Fred S. Hutchins, San Francisco, Cal. Filed Dec. 19, 1905. Serial No. 292,427.

1. In a gas engine, an engine frame or structure comprising a crank case, a separately formed slide valve chamber secured to the crank case, and a cylinder secured to the slide valve chamber; said three parts being in longitudinal alignment, with said valve chamber in the intermediate position.

876,905. Carriage Top. William J. Hoskyns, Detroit, Mich., assignor to The Auto Accessories Manufacturing Company, Detroit, Mich. Filed Aug. 10, 1907. Serial No. 387,966.

1. In a carriage top, in combination with a standard bow adapted to be attached to the seat of a carriage, a folding bow provided with a bent cross bar adapted to engage within the arch of the standard and support the flap of the cover when the folding bow and the standard bow are closed together, an attachment to which said folding bow may be connected at the bottom of said standard bow, and an attachment to which said bow may be connected near the spring of the arch of said standard bow, substantially as described.

876,937. Power Transmitting Mechanism. Alexander T. Brown, Syracuse, N. Y., as-

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

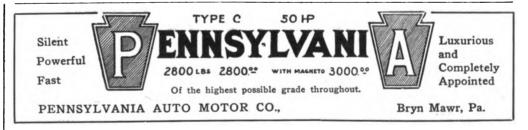
FOR SALE—No. 14 sliding gear transmissions; 90 bodies, primed only; 75 bodies, painted only; 72 bodies, painted and trimmed; 69 sets bevel drive axles and hubs; 130 frames, unassembled; 30 frames, assembled; 35 radiators; 50 tanks; 59 two-cylinder opposed engines, 5½5; 105 sets springs; 48 mufflers; 98 sets universal joints; 47 steering wheels, 14-inch; also various quantity of other parts, all suitable for 2,000 pound touring car or runabout. RANDS MFG. CO., Detroit, Mich.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

signor to Brown-Lipe Gear Company, Syracuse, N. Y. Filed Sept. 6, 1904. Serial No. 223,371.

1. In a vehicle, a pair of axle sections, a driving gear secured to each of said sections, a shaft passing across the faces of said gears and inclining with respect to the planes thereof, pinions loosely carried on said shaft, each of said pinions having an extension with a gear, and planet gears carried by said shaft and meshing with the said extension gears, the said pinions being on opposite sides of the axle sections, and each meshing with one of the driving gears.





A NEW SENSATION

Equip your car with

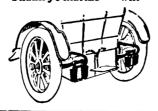
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

Removed to New York Meter Mart Bidg.



KINWOOD AUTOMOBILE PARTS.

ONE QUALITY-THE BEST.

OUR LEADERS:
Kinwood Perfection Radiators
and
Kinwood Mechanical Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc.

Large facilities and dependable deliveries.

K. PRANKLIN PETERSEN, 166 Lake St., Chicago, Western Representative. THOMAS J. WETZEL, I I Warren St., New York, Eastern Representative.

THE KINSEY MFQ. CO., Dayton, Ohio.



CIMIOTTI GARAGE

Now York Oity

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen.

No Renting.

Try us.

Tel. 2686 River.

Wico Adjustable Spark Plug



\$1.00 **Each**

Guaranteed

WITHERREE ICHITER CO..

541 West 434 St., New York

HAYNES

Always Has A Perfect Score

MAYNES AUTOMOBILE COMPANY LUKOMU, IND. Members A. L. A. M.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway—CHICAGO, 1702 Michigan Av.

Logan 1908 Model S Three Ton Truck

A truck equipped with a four cylinder water cooled 40 H. P. motor, built to give service month after month and year after year, and representing the best thought of the oldest and largest plant in America devoted to the manufacture of commercial motor cars. For detailed description address

THE LOGAN CONSTRUCTION CO. CHILLICOTHE. OHIO.



For catalog, address Dept. 16. NORDYKE & MARMON CO.

(Estab. 1851)

INDIANAPOLIS, IND.

THE CHANDLER

Name Plates and Stampings SPRINGFIELD. MASS.

THE THOMAS

AMERICA'S ONLY ENTRY

NEW YORK-PARIS RACE

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Andorson, Ind.

"AURORA" THE

Runabeut \$775—20 H. P. Commerciai Wagon \$1000—20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS,

Aurora, Ill.

Better Because Regular

An Oberdorfer Pump never "sticks." It works in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y. Water St.

INVESTIGATE

The Great Smith Car

SMITH AUTO, CO., MPRS. TOPEKA, KANSAS

TRUFFAULT-HARTFORD SHOCK ABSORBER Mark

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.
Write for Rough Road Booklet to Department I.
HARTFORD SUSPENSION CO., 66 Vestry St., New York R. V. Hartford, Pres.



Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order.

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

LAVALETTE & CO.

80% of Magnetos used in 6-cylinder cars are

EISEMANN High-Tonsion MAGNETOS NEW YORK 112 West 424 Street.



FIRESTONE TIRE & RUBBER CO., Akren, Ohio



MICHELIN TIRE CO.,

Militown, N. J.

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

St. BOSTON—292 Devoushire Street.
BUFFALO—724 Main Street.
DENVER AUTO GOODS CO.—Denver, Colo.
PENN AUTO SUPPLY CO.—Philalelphia, Pa.
SAVELL RUBBER CO.—Jacksonville, Fla. NEW YORK—148 Chambers St., and Broadway and 73d St. CHICAGO—20 LaSalle Street and 1615 Wabash Avenue. FOBES AUTO SUPPLY CO., Portland, Oregon. DET FOBES AUTO SUPPLY CO., Seattle, Washington. WAITE AUTO SUPPLY CO., Providence, R. I.



\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY AUBURN, IND. Bex No. 250

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.



STA-RITE PLUGS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE and see for yourself. Double or single Porcelain,—Mica or Magneto,—all kinds. All Good Dealers.

THE R. E. HARDY CO.,

85 Watts St., New York City

Ready-Flated Tires.

They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY New York City. 43 Warren Street,

"Keep your eye on Continentals"



THE INDE

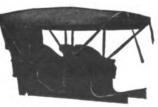
IS RIGHT

outweer an auto, and it will Ruilt te Send for Booklet

Index Speed Indicator Co. MINNEAPOLIS, MINN.



SPRINGFIELD TOP (Fat. 1895) Aluminum **Bodies SPRINGFIELD** METAL BODY CO., 366 Birnie Avc., Springfield, Mass.



High-Grade Axles



Prossed Steel Frames

Stoering Columns Steel Stampings of All Kinds

Transmissions

Send Prints for Estimates

243 Clinton Street,

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON "No Sand Too Deep-No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO.

Jackson, Mich.



Address Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City. Western Inquiries arford Motor Car Co. of Cleveland 1372 East 12th St., Cleveland.

ALUMINUM BODIES J. M. QUINBY & CO.

EST. 1834

Carriage Builders

REWARK N. I

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 856 Jefferson Ave., Detroit, Mich

For every dollar invested, including purchase price and maintenance, there are two or three times as many miles of actual service in a Single Cylinder Cadillac as in any other motor car.

CADILLAC MOTOR CAR CO, Detroit, Mich.

Member Assn. Licensed Auto. Mfrs.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio,



For catalogues, address
THE CONTINENTAL AUTO MFG. CO.



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.
New York.

\$250 "SUCCESS AUTOMOBILE

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature. tive literature.

Success Auto Buggy Mfg. Co., Inc. 531 De Belivere Ave., St. Louis, Me

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY NEW YORK OFFICE-24 Broad Street. Old Colony Building, CHICAGO.

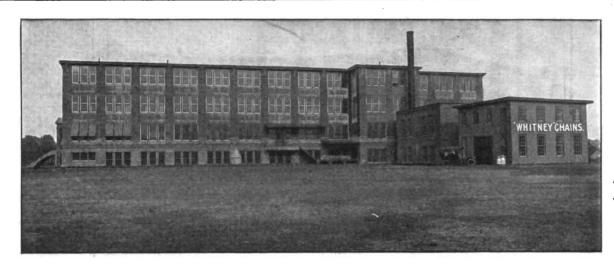
THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

for	one	year,	commencing	with	the	issue	of_
-----	-----	-------	------------	------	-----	-------	-----

Name

Address.



We are now well settled in our

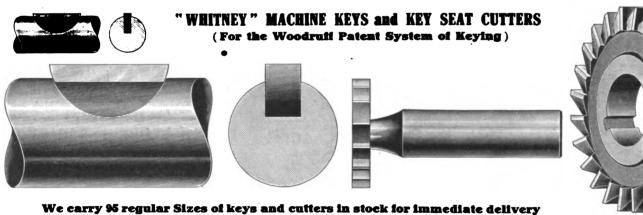
New **Factory** and

READY TO SHOW RESULTS

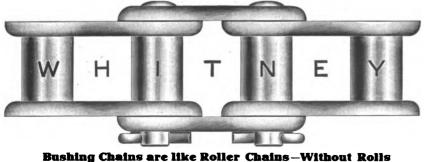
Prompt Delivery and Constant Improvement in Quality

In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy. Efficiency and Finish we are going to the very limit.

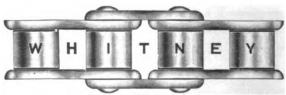
We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.



"Whitney" Detachable Bushing Chain—Patented



Roller Chatn



The Whitney Mfg. Co. Hartford, Conn.

"Keep Your Eye On Continentals"

Continental

Fastest Tires in the World!

CONTINENTALS—The Great Racing Tires—Again Victorious.

At the Ormond (Florida) Meet, event after event was captured by automobiles with Continental Tires. The great race for the Minneapolis International World's Championship Trophy was won on these tires.

The principal race of the week, for the Automobile Club of America Cup, showed Continental Tires again triumphant.

300 miles were covered in 233 minutes and 44 seconds—77 miles an hour. All world's records from 100 miles upwards broken.

In this long distance, the winning car had no tire troubles whatever, and the tires were cool at the finish.

Ormond demonstrated anew the advantages of Continental Ready-Flated equipment. This consists of tires carried already inflated on Continental Demountable Rims. In case of a puncture, a new tire can be substituted immediately for the one that is damaged.

The U. S. Army Despatch Automobile carrying a message from General Grant at New York to the Commanding Officer at Fort Leavenworth, Kansas, was equipped with Continental Tires.

This car made a phenomenal journey through snow drifts in mid-winter and distanced every other automobile racing westward at the same time.

In Europe—Jarrott has just established a new world's record for the distance by running 50 miles in 36 minutes, 5 seconds, also on Continental Tires.

The fact that Continentals are "the fastest tires in the world" is one reason why Continental Tire production is greater than that of any other concern.



CONTINENTAL CAOUTCHOUC COMPANY

J. M. GILBERT, General Manager

43 Warren Street, New York, N. Y.

BRANCHES:

DETROIT-226 Jefferson Ave.

SAN FRANCISCO—422-424 Van Ness Ave., cor. Ash.

DISTRIBUTING AGENTS:

Acme Rubber Co., 925 Jefferson Ave., Toledo, Ohio. Centaur Motor Co., 59 Franklin St., Buffalo, N. Y. Continental Agency Co., 1268 Euclid Ave., Cleveland, Ohio. Jas. L. Gibney & Bro., 211 No. Broad St., Philadelphia, Pa. Neustadt Automobile & Supply Co., 3948 Olive St., St. Louis, Mo.

Plant Rubber Co., 322 First Ave., No. Minneapolis, Minn. Revere Rubber Co., 700 Baronne St., New Orlcans, La.
The Post & Lester Co., { 821 Boylston St., Boston, Mass. 175 Asylum St., Hartford, Conn. Western Continental Caoutchouc Co., 1438 Michigan Ave., Chicago, Ill.





One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us—it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out — that hurt the consumer, the dealer and

hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co.

146 Wheeler Ave., Beloft, Wis.

A Spark Plug that misses after the first fire

is about as useless for ignition purposes as a parlor match. Continuous, reliable ignition; a hot, snappy spark with



You don't have to guess with the Wico Plug. It possesses micrometer adjustment and the gap can be set to a known distance.

Wico Spark Plugs are made in all standard sizes. Price, \$1.00. A sample sent upon receipt of price. Write Dept. 20 for catalog. For sale by Agents and Dealers Everywhere.

Witherbee Igniter Company

THREE FACTORIES.

New York Chicago Detroit 1876 Broadway 1429 Michigan Ave. 220 Jefferson Ave. Baltimore Office 510 Continental Trust Building.



"A Mechanical Masterpiece"

I No, you don't!

¶ Until you have ridden in a Marmon, you simply do not know what ease of motion in an automobile is!

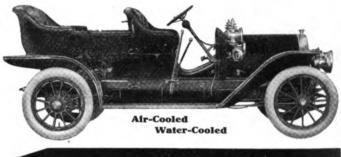
• Until you have investigated the Marmon, you do not know how much this car has contributed to the final perfection of the automobile.

■ Send for a catalog. Read up on the many exclusive Marmon features. Take a ride in the car itself. Test it on a bad hill, or on a particularly rough road.

I Then, and not till then, will you buy an automobile wisely.

Model H, Touring Car, 40-45 H. P., \$3500 Model H, Roadster, 40-45 H. P., 3500 Model G, Touring Car, 35-40 H. P., 3000

The Easiest **Riding Car** in the World



For catalog, address Dept. 16

Nordyke & Marmon Co., (Estab.) Indianapolis, Ind.

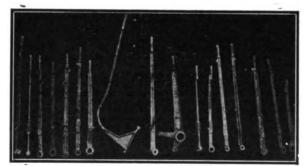
Boston, Mass., F. E. Wing Motor
Car Co., 12 Columbns Ave.
Philadelphia, Pa., Brazier Auto
Works, 38th and Mar ket Sts.
Baltimore Md., Snodeal Automobile
Co., 2552 Madison Ave.
East Orange, N. J., Rickey Machine
Co., 92 Eaton Place.
Mikwaukee, Wis., John Ure, Jr., & Co., 172 12th St.
Indianapolis, Ind., H. T. Hearsey
Vehicle Co.

Desirable Territory for Dealers.

St. Lonis, Mo., Van Automobile Co.
1706 Washington Ave.
Pittsburg, Pa., Pennsylvania Auto
Co., Hay St. and Knight Ave.
Wilkinsburg.
Waterloo, N. Y., Waterloo Automobile Co.,
Binghamton. N. Y., Heller-Spawn
Motor Car Co.
Los Angeles, Cal., C. S. Anthony,
110 East 9th St.

Note List Above

PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM CRAMP A SONS SHIP & ENGINE BUILDING COMPANY, Philadelphia, Penna.

Our new 1908 Catalog **Auto Tools** and **Forgings** mailed gladly. Write for it now. BILLINGS & SPENCER CO. HARTFORD, CONN.

AUTOMOBILE BODIES



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished RACINE NOVELTY MFG. COMPANY. Racine, Wis.



Hotel Tuller

New and Absolutely Fireproof. Adams Ave. & Park St. DETROIT, MICH.

AUTOMOBILE **HEADQUARTERS**

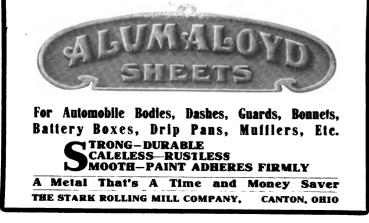
In center of Theatre, Shopping and Business district. and Business up.

Club Breakfast, 40c up
Luncheon, 50c
Dinner, 75c

Table De Hote Dinner, 75c
A la Carte Cafe Grill Rooms
EVERY ROOM WITH BATH
Rates \$1.50 per Day up. L. W. TULLER Prop. M. A. SHAW, Mgr.







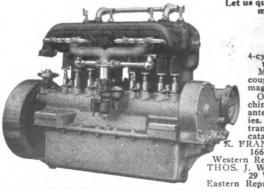


Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. ¶We do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. ¶It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. ¶A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. ¶It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. ¶Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind.

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on 4-cylinder motors for 1908 THREE SIZES

4½ in. x 4½ in.
4½ in. x 5 in.
5 in. x 5 in.
5 in. x 5 in.
4-cylinder with self-contained oiling system.
Motors are ready for coupling any standard magneto.
Our new for

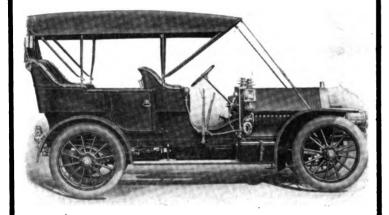
magneto.

Our new factory and machinery enable us to guarantee quality and deliveries. Also clutches and transmissions. Send for catalogue.

K. FRANKLIN PETERSON, 166 Lake St., Chicago, Ill. Western Representative THOS. J. WETZEL, 29 W. 42d St., New York. Eastern Representative.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.

THE "JEWEL 40" THE "NON-SKIDDING" CAR



Compare following specifications with other cars at \$3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Good-year Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY
234 Walnut Street, - Massillon, Ohlo, U. S. A.

National

Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K—4-cyl., 4%x5 \$3500

Model R—6 cyl., 4½x4¾ \$4200

Model N—4 cyl., 5x5 \$3700 Model T—6 cyl., 5x5 \$5000



Write for Particulars

National Motor Vehicle Company 1007 East 22d Street

INDIANAPOLIS, - IND.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



All Roads Look Alike . To The White

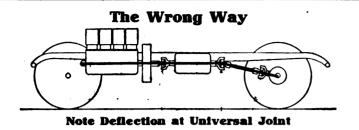
The White, owing to the advantages inherent in its unique system of generating and utilizing steam as a motive power, will take you anywhere at any time—it is a touring car in the fullest sense of the term. If you own a White, you need not wait until favorable weather and the County Supervisors make the roads hard and smooth, nor need you confine your touring to the main highways. All the wild and beautiful spots of nature are accessible to the driver of a White, regardless of road conditions. Buy a White and see the country as you have never seen it before and as you cannot see it in any other way.

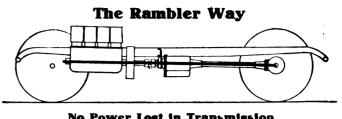
One other point of interest, the White, because of the simplicity of its mechanism, is particularly adapted for the man who wishes to drive, and to take care of his own car.

Write for Literature

THE WHITE COMPANY CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Philadelphia, 629-33 N. Broad St. Boston, 320 Newbury St. Chicago, 240 Michigan Ave. Cleveland, 407 Rockwell Ave.





No Power Lost in Transmission

Straight Line Drive

Of the new ideas in automobile construction none are of greater value than the straight line drive system as applied to the 1908 Ramblers.

It is well known that no matter how good or carefully made the universal joint, there is an inevitable loss of power and great wear due to deviation from a straight line in the power transmitting system and the loss increases with the square of deflection.

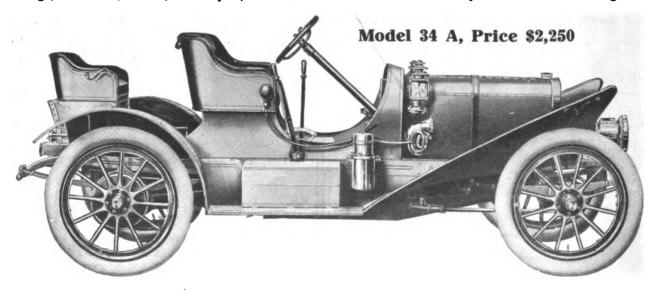
With the Rambler straight line drive there is no deflection, hence no loss and the full power of the motor is delivered to the driving axle.

This is but one of many valuable features; our catalog tells of others of equal value; write for it today.

Thomas B. Jeffery & Company Main Office and Factory, Kenosha, Wisconsin

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

Representatives in all leading cities.



This four cylinder chassis, equipped both as a 3-passenger roadster and 5-passenger touring car. Price of each style \$2,250. The Rambler Utility Car with double opposed motor, \$1,400. Volume XVII.

New York, U. S. A., Thursday, March 19, 1908.

No. 25

POPE'S ENEMIES INVADE INDIANA

Seek to Have Him Removed as Receiver in that State—Court Confirms His Sale of Two Factories.

The men who are seeking to make trouble for Albert L. Pope, as receiver for the Pope Motor Car Co., who heretofore have confined their activities to the State of Ohio, wherein the Pope-Toledo plant is located, have carried the war into Indiana, which contains the Pope-Waverly factory. They have caused to be filed in the latter State a petition praying for the removal of Pope and of the co-receiver George A. Yule, which is similar to the petition filed in Ohio. The court has set no date for a hearing. While these proceedings, as the Motor World previously stated, include Yule, they really are aimed only at Pope. The receivers themselves are working in perfect harmony and it does not seem probable that their tenure of office will be disturbed.

Meanwhile, the United States Circuit Court in New Jersey, in which State the company is incorporated, has approved the sale by the receivers of the Pope Mfg. Co. of the Imperial plant at Chicago for \$100,-000, and of the Rambler plant for \$125,000. When the receivers requested the order of the court confirming the sale of the Rambler factory to Thomas B. Jeffrey, of Kenosha, Wis., the National Casket Co., which previously had been negotiating for its purchase, unexpectedly raised its bid to \$124,-000. Mr. Jeffrey, who previously had offered \$110,000 for the property, was communicated with and increased his figures to \$125,000, at which figure it finally was sold to him.

Shoemaker in More Hot Water.

C. C. Shoemaker, the head and front of the much troubled Shoemaker Automobile Co., Elkhart, Ind., now has some troubles all his own, and must have cause for reflection on the difference between the chicken and the automobile industries. The property of the company was attached while it was being removed from Freeport, Ill., to Elkhart, where after its release a receiver took charge and where early this month the company was declared bankrupt. Last week, following the filing in Illinois of a petition in involuntary bankruptcy against Shoemaker personally, Thomas H. Hollister was appointed receiver. The petitioning creditors are the C. H. Fuller Advertising Agency of Chicago, whose claim is \$15,000, and C. H. Cooper of Kansas City, Mo., and M. L. Feckler of Elkhart, Ind. Cooper and Feckler both allege that Shoemaker induced them to part with \$5,000 each in exchange for stock in his automobile company which he agreed to take off their hands in case they repented of their bargain. Of course, their repentance became very sincere, but they still hold their stock. They allege that Shoemaker, while insolvent, transferred real estate and property to his brother and other persons, that he has concealed other assets and has absented himself from his usual place of business. Previous to his entry into the automobile trade, Shoemaker had a prosperous business in incubators, chickens and chicken supplies.

Utah Men with Wonder-Working Boiler.

The Western Motor Co., of Salt Lake City, Utah, has been incorporated under the generous law of Arizona, to manufacture a steam flash boiler which, it is stated, may be attached with equal facility to a freight or passenger car, a street car or an automobile. The officials of the company are: Edmund Wilkes, president; Milton L. Oglesby vice-president and manager; Joseph E. Aglesby, secretary and treasurer.

Settled Their Troubles Out of Court.

The litigation involving patents on tire cases or covers in which the Gilbert Mfg. Co., New Haven, Conn., and the Teel Mfg. Co., Medford, Mass., have been engaged, was last week settled out of court. By the terms of the agreement, the Teel company will discontinue the manufacture of such cases or covers.

TWO FAKERS CONVICTED OF FELONY

Their Promotion of "a Motor that Never Grew Hot" Branded Bunco—Queer Methods Exposed at Trial.

How Benson Bidwell and Charles F. Bidwell of the Bidwell Electric Co.-the concern which is said to have exploited a "cold motor" that would not stay cold, but smoked when demonstrated to a few of the thousands of stockholders who helped swell the receipts of the \$2,500,000 corporation, and which motor was going to revolutionize the automobile industry, among many other things, but didn't-were able to get by the city and post office officials with their schemes was made clear before Judge Chetham in Chicago, by Miss Ida C. Palmer, an innocent looking employe. The recipe so successfully used by the exploiters, according to Miss Palmer, was this:

"Fill 'em (the examining officials) with cheap cigars, give 'em a good talk and send 'em on their way rejoicing."

The company's methods thus succinctly summarized were brought out by the questions of Assistant State's Attorney Popham at the trial of the Bidwells, which began on February 17th, and ended on Saturday, 14th inst., the jury deliberating for seven hours and bringing in a verdict of guilty on the charge of operating a confidence game, which is a penitentiary offense. The jury at first reported also a similar verdict on the charge of obtaining money by false pretences, but counsel for the defense objected to the double verdict, and the court directed that the jury find on only one count, which was done after a half hour's further deliberation, finding against both defendants, who are father and son.

Miss Palmer's testimony was elicited through the desire of the prosecution to ascertain if the company had not been investigated by the authorities. She

was the star witness for the prosecution, and told how, when one of Mayor Dunne's inspectors came around, one of the Bidwells gave him some cigars, then told him what a fine motor it was, what a legitimate business he had and how much the dividends were going to amount to. After telling the inspector this, declared Miss Palmer, Bidwell took him to the door, gave him some more cigars, patted him on the back, escorted him to the outer door, gave him another cigar and asked him to call again. When Bidwell came back, according to Miss Palmer's testimony, he said:

"That's just the way I pulled the wool over the post office inspector's eyes. Give 'em cheap cigars and talk to 'em. That's the way I get along with these fellows."

"Give 'em a good story, Ida," was a piece of advice given her, she said.

Miss Palmer said it was her duty to go through the shop, pointing out motors of the ordinary patterns and describing them as cold motors. The one operating motor was run for five minutes at a time, for to run it longer would melt the snow and ice which had "congealed" on it with the assistance of a man and a bucket. The witness further stated that she had sold considerable stock and that one time when she suggested that they needed an expert bookkeeper to straighten out the books of the company it was Charles Bidwell who said to her:

"An expert bookkeeper is just what we don't want. We have girl bookkeepers because they don't know anything. A man would find out right away what was going on."

The witness stated that the "last grand scheme" of the Bidwells was to get her to write to dissatisfied stockholders and tell them that she would buy back their stock at 25 or 35 per cent. of the original cost if they wanted to get rid of it. She received mail in this connection addressed to "Victoria C. Freeman, general delivery." The idea she said, was to sell this stock over again to new buyers at 75 per cent. on the hundred. She also stated that the Bidwells had promised her \$2,000, but that she only received \$130 in instalments, which may explain her willingness to aid in the prosecution of the promoters.

Charles J. Moberg, who said that he worked for the Bidwells 449 days, was another witness called.

"Charles Bidwell sometimes brought people in after the motor was frosted," said Moberg. "Then he would say, 'Give us light,' and I would turn on 250 electric lights that were run by the motor. These were kept going five or ten minutes, but only when people were in there to see it. I never saw it working any other machine or supplying power."

O. C. Wilson, an advertising agent, said he placed \$85,000 worth of advertising in papers, which the Bidwells authorized and paid out of the funds of the company.

The Week's Incorporations.

Manistee, Mich.—American Garage and Motor Co., under Michigan laws, with \$5,000 capital. Corporators not named.

St. Louis, Mo.—Spring Motor Fan Co., under Missouri laws, with \$50,000 capital. Corporators—Herman O. Engelke, Edgar E. Engelke and Edward H. Rose.

Galion, Ohio.—Fetzer Automobile Mfg. Co., under Ohio laws, with \$100,000 capital. Corporators—James F. Shumaker, Allen H. Fetzer and James O. Sloan.

Kittery, Me.—Taylor-Palmer Garage Co., under Maine laws, with \$150,000 capital stock, of which nothing is paid in. Corporators—O. Sumner Paul, president, and Albert H. Peavey, treasurer, Kittery, Me.

New York City, N. Y.—General Tire Repair Co., under New York laws, with \$2,000 capital. Corporators—Charles W. Rehermann and John F. Rehermann, 220 West Forty-eighth street, New York City, N. Y.

Jersey City, N. J.—Federal Taxicab Co., The, under New Jersey laws, with \$200,000 capital; to manufacture motors, engines, machines and vehicles. Corporators—E. McM. Mills, R. F. Tully, C. A. Cole, Jersey City, N. J.

Paterson, N. J.—Taximeter Auto Co., under New Jersey laws, with \$125,000 capital; to manufacture motors, engines, cars, boats, etc. Corporators—W. F. Harding, Haledon, N. J.; A. A. Fischer, J. F. Blauvelt, Paterson, N. J.

New York City, N. Y.—Harvard Automobile and Garage Co., under New York laws, with \$10,000 capital. Corporators—Alois Habisreitinger, 1696 Week avenue; Benjamin B. Dolero, 110 West Ninety-fifth street, New York City, N. Y.

New York City, N. Y.—Progress Motor Vehicle Co., under New York laws, with \$50,000 capital; to deal in, maintain and operate motor vehicles, etc. Corporators—F. J. Hogan, M. Schlesinger, L. Divizic, New York City, N. Y.

New York City, N. Y.—Union Taxicab Auto Service Co., under New York laws, with \$150,000 capital; to manufacture, deal in and hire out automobiles, etc. Corporators—W. J. Duane, F. A. Phillips, C. C. Bailey, New York City, N. Y.

New York City, N. Y.—Knickerbocker Taximeter Cab Company, under New York laws, with \$15,000 capital: Corporators— William B. Hurlburt and Sanford J. Wise, 1540 Broadway, and Stewart H. Eliott, 1183 Broadway, New York City, N. Y.

New York City, N. Y.—S. & S. Variable Speed Gear Co., under New York laws, with \$20,000 capital. Corporators—Bartlett G. Yung, 34 Gramercy Park; C. D. Francis, 60 Wall street, New York City, N. Y.; Bernard E. Scriven, 1203 Eighth avenue, Brooklyn, N. Y.

San Francisco, Cal.—Taxicab Co., The, under California laws. with \$500,000 capital; to operate taxicabs. Corporators—J.

W. Reese, Gilbert D. Boast, Joseph D. Kennedy, Clarence E. Sheets, James Moriarty, Charles McDonough and Nathan M. Moran.

Kittery, Me.—Simplex Motor Car Co., under Maine laws, with \$50,000 capital stock, of which nothing is paid in, to manufacture, deal in and repair automobiles and motors. Corporators—O. Sumner Paul, president, and Albert H. Peavey, treasurer, Kittery, Me.

New York City, N. Y.—Requa-Coles Co., under New York laws, with \$100,000 capital, to deal in automobile devices. Corporators—Leonard F. Requa, 267 West Seventy-ninth street, New York City; David H. Coles, 11 McDonough street, Brooklyn, N. Y.; Philip Van Alstine, Spring Valley, Rockland county, N. Y.

In the Retail World.

The Maxwell-Briscoe Automobile Co., has taken possession of its new garage at 1616-18 Grand avenue, Kansas City, Mo.; its proportions are 50 by 100 feet.

George F. Dyer has sold his automobile business at Manchester, Mass., and will remove to the South. Ill health in his family is his reason for relinquishing the business.

Wyatt & Listner is the style of a new firm which has commenced business at 1773 Broadway, New York. They have the agency for the Empire State Tire Co., of Buffalo.

S. L. Hoagland of Almond, Wis., has moved his garage equipment to Waupaca, in the same State. He has reuted the first floor of the Peterson building for garage purposes.

The Seattle (Wash.) Automobile Co. has filed the necessary legal notice of its intention to increase its capital stock to \$100,000. A meeting of the stockholders will be held for the purpose on April 27th.

Manitowoc, Wis., has been for some time in need of a garage and now is to have one of an up to date character. It will be opened by Hall Bros., of that city, who have secured agencies for half a dozen leading automobiles and will cover the city and surrounding territory.

The Jordan Automobile Co., Minneap olis, Minn., which went into the hands of a receiver in November last, resumed business last week at its old stand, 217 Fourth street, with the Franklin agency as its exclusive account. It is stated that the company paid every creditor in full.

Rockford, Ill., is to have a new garage at 122 North First street, where Fred Miller purposes erecting a two-story brick building, 140 by 120 feet in dimensions. Troller & Co.. a corporation formed by Ed Troller and Miller, will occupy the first floor as a garage, where they will handle Oldsmobiles and Wintons, Goodrich tires and a full line of accessories. They are located now in South Water street.

MIXING POETRY AND MOTOR CARS

Kansas City Genius Shows How It Can be Done—His Rainbow Hued Inducements to Customers.

There are two Kansas Cities, but only one Allen Dorman, who lives within the confines of one of them-the one located in Missouri. He is the "owner and manager" of the "K. C. Auto Brokerage Co.," and is "Kansas City's Automobile Leader"-his letter head says so. But according to this same bit of stationery he does more than lead with such prosaic things as automobiles, for there is evidence that he is able to mix poetry and brokerage in large doses. The letter head, which, incidentally, bears in one corner a portrait of Allen Dorman, as he is to-day, and in the other corner a picture of the same but much leaner Dorman, as he looked 20 years ago, proclaims also that he is the "author of Allen Dorman's poems; 524 pages; silk finish; illustrated"; a few of them are enumerated, among them, "Diamonds Among the Lillies," and "Satan with his Tail Screwed to a Bench."

The letter head also makes known that Dorman is "promoting the Kansas City Electric Plow Co., capital stock \$1,000,000." He has issued a circular letter addressed "To My Customers," which shows how an inspired genius "does things" when he engages in the automobile business, and is not occupied with the task of poetically screwing Satan's tail to a bench. The letter is worth a niche in the hall of fame. Read it:

"To my Customers:

"Many thanks for my write-ups, most all over the United States, from Maine to California. I wish to show gratitude for my write-ups in the sale of automobiles whenever I can. Science is on the move. Civilization saw the wild horse of the plains harnessed to till the soil. The wind mill and storage battery may draw on the mad force of the storm to run your auto or plow the land. The tempest may be harnessed to man's use. Do not purchase an auto that soon may become obsolete. Purchase of me; I will fix you right. I am in a position to deal direct with the manufacturer. I also do a general agency business. An up town office for any dealer or manufacturer. I can sell you a fine outo cheap. I know of bargains for somebody. Please call and consult me before you purchase. State the kind and size you wish. I wish to secure 1,000 names and addresses of those who wish to purchase autos in 30, 60 and 90 days, so I can arrange to order a car load each week. You pay half down when I order, less 30 days club rates. The good work has already started. Send me your name and address, plainly written. Freight from \$9 to \$99 per auto. Two or more

autos are a car load. Second hand machines sold or exchanged. City trade earnestly solicited. Editors when in the city should ask my friends for a ride. Please send names. State your nearest railroad station. Goods shipped direct from factory. State what you wish. Do your people need rain?"

The poetic genius of Dorman is reflected in his correspondence. In one of his letters addressed, not to an individual, but to a big automobile company, requesting a catalogue, signed "Your friend," and marked "Personal," he says: "I secured orders for \$25,000 of autos last Tuesday when I was so tired I could not lay on the bed."

First Show in the South.

Every automobile dealer in Memphis, Tenn., attended a meeting of the Automobile Dealers' Association of that city last week, at which it was decided to hold an automobile show in the Auditorium on April 16, 17, and 18. There was much enthusiasm over the project, which, according to President Jerome P. Parker, will be the first automobile show given in any of the southern States. The dealers say they will spare no expense to make the affair a success, and the work of preparation has been placed in the hands of competent committees.

American Locomotive Making Taxicabs.

The American Locomotive Co. has entered the taxicab field, through its subsidiary automobile company, an initial contract for 100 taxicabs being now in course of production at the plant of the American Locomotive Automobile Co. at Providence, R. I. The order was placed by the William H. Seaich Co., which has the contracts for the cab privileges at the Waldorf-Astoria, the Holland House and the Park Avenue Hotel, in New York.

Trade Association Formed in Michigan.

As a result of the promotion of the trade carnival which begins in Indianapolis on Monday next, the Indianapolis Automobile Trade Association has been formed and will be incorporated. Frank Staley, R. I. Eads and C. S. Hicks were named as a committee to attend to the preliminaries.

Borsch Adopts Explanatory Name.

Robert Bosch, New York, Inc., has changed its title to the more euphonious and explanatory Bosch Magneto Co. The change is of name only; the officials, product and location, 160 West Fifty-sixth street, New York, remain exactly as heretofore.

Toledo Parts Company Fails.

The Toledo Auto Parts Co., Toledo, Ohio, is in the hands of a receiver. Action to that end was taken by Frank J. Cheney, who owns the building occupied by the concern. He alleged that it is insolvent and unable to pay \$700 due under the lease.

INTERCHANGEABILITY STANDS TEST

American Cars Dismantled and Reconstructed from Promiscuous Lots of
Parts-English Test a Practical Dem

American manufacturing methods, on trial at the hands of the British public and an official committee of the Royal Automobile Club, have won an overwhelming victory in the performance of the three 10 horsepower, Model K. Cadillac cars which have just completed the "standardization test," which has set all England by the ears. Selected by ballot, tried out officially, and then dissected and intermingled in one confused mass, the parts were again assembled, the three "new" cars adjusted to running order, and by way of final demonstration of their running capabilities, were run through a 500 mile endurance run on the Brooklands motordrome. The performance was carried out at the instance of the Anglo-American Motor Co., of London, British agents for the Cadillac product.

The preliminaries to the test took place on February 29, when representatives of the Royal Automobile Club met at the show rooms of the Cadillac agency and selected the three cars out of a group of eight. Characteristic of the thoroughness with which the entire test was carried through, was the method of choice. Four cars were first picked off-hand, and the three were afterward selected from these by ballot. A run out to the Brooklands course, followed by a 25 mile running test on the track followed. In this, one car was so unfortunate as to reverse a spring shackle when crossing a bump in the course, and the occurrence was recorded as an error against it, though admittedly not a serious one.

The complete dismantling of the cars occupied two whole days, only two men being alowed to take pare in the work, and then only under official supervision. The dismantling was carried out to the extent of stripping the chassis down to the dashboards, coils and pedals. During the remainder of the week the parts accumulated from the cars were mixed and reassorted into heaps, from which the rebuilt cars were to be assembled. The final endurance test was planned to occur on Monday, 9th inst. One of the cars was finished in time to participate in the program as arranged. The other two were delayed, their parts being frozen fast in the floor of the barn where they had been stored, owing to an unforeseen rain and sleet storm, which combined to ice up the course and delay the work of car manufacture.

Later, the parts of the remaining cars were thawed out and put into place and the trials completed as planned. According to cable despatches, the three cars ran "wheel to wheel" for the entire distance, covering 500 miles at the rate of 34 miles an hour.

STUDEBAKER

Each successive endurance event simply serves to demonstrate more forcibly than before the extraordinary endurance of this sturdy car

The Latest Studebaker Achievement

Chicago Inter-Ocean, March 8, 1908

STUDEBAKER ARMY CAR REACHES FORT

Machine Driven From New York by Drivers Huge and Smith Arrives at Leavenworth After Eighteen Days of Travel.

According to telegraphic advices, the thirty horse-power Studebaker car, which made the ron from New York, arrived at Eort Leavenworth at 11:32-yesterday morning after having been on the way-eighteen days two hours and thirty-two minutes.

Colonel Loughborough accepted the message from General Frederick Dent Grant, after which the tourists were welcomed by General Hall. The car covered the last-ten miles in twelve minutes. The car was escorted to Leavenworth by the local automobile club members. club members

Mayor Peter Everhardy of Leavenworth ex-Mayor Peter Everhardy of Leavenworth ex-tended the key of the city to Drivers Huge and Smith at a bacquet held last evening. The car left for Kansas City at midnight. The machine left New York on Tuesday, Feb. 18, and completed one of the most re-markable trips ever accomplished by an au-

markable trips ever accomplished by an automobile. It would have been a hard trip for any car, even under the most favorable conditions, but starting, as it did; on the heels of the worst snowsform which has visited the central states in the past twenty years, it is marvelous that the distance, nearly 2,000 miles, should be negoriated in a period of only a little over two waeks.

Starting from New York six days after the New York to Paris racers had begun their trip westward, and that after only a few; hours? preparation, the little car, following the same route as the transcontinental racers, moved with such regularity upon its way that by the time it reached Chicago it had overhauled and passed every one of the New York to Paris contestants. It is true that the car was driven night and day by relays of drivers, but the real secret of the splendid time made by the car was dre to the fact that practically no time

was lost making adjustments of renairs. It was always ready to push on when the driver was ready to take the wheel. Much time of course, was lost upon the fearful roads in northern Indiana. Hours were spent digging through single snowdrifts, and when the aid of horses was finally secured all the power the sturdy little car possessed was utilized to flounder through the snow.

It really does not seem credible that any piece of machinery could be so perfectly constructed as to successfully endure the work the little Studebaker engine was called upon to undergo throughout this trying jour-

ney.
When the car reached Chicago, instead of When the car reached Chicago, instead of remaining here for several days to be overhauled, as did the New York to Paris contestants, it again started upon its way after only a few hours' delay. It was after dark Tuesday evening before General Grant's message was presented to Brigadier General Carter, commanding the Department of the Lakes, and before daylight the following morning it was on its way to Fort Leavenworth, Kan., via Omaha, Neb., having found it necessary to abandon the shorter route on account of the roads being practically impassable. impassable.

impassable.

From the time of leaving New York until the car reached Leavenworth, the trip, was one continuous ovation for the sturdy Studebaker car and its plucky drivers. The drivers and ear had many narrow and thrifting escapes on the way. Ner Utica, N. Y., the car and drivers were pitched into the Eric canal, and several times before reaching Chicago the drivers, unable te distinguish the roadbed, ran into a ditch. Out in Iowa Smith had to ditch the car in order to avoid a collision with a runaway horse, and later on ran into a wire fence across the avoid a collision with a runaway horse, and later on ran into a wire fence across the road, which was hidden in a snowdrift. This was the same driver, Milton Smith, who drove from Kendallville, Ind., to Michigan City, staying at the wheel for over forty hours, and then with only an hour's rest, being the only man familiar with the road. climbed on the machine again and rode into Chicago beside the new driver, Jack Huge, making nine hours more on the car, or nearly fifty hours in all.

As one reviews the incidents and hard-

nearly fifty hours in all.

As one reviews the incidents and hardships of this trip, one cannot but arrive
at the conclusion that it was the most severe trial of endurence ever performed by
any car, and it should fully demonstrate to
the War Department the availability of
such a car as the Studebaker for the purpose of carrying army Jispatches in time
of war.

Studebaker Automobile Company

Main Factory, South Bend, Indiana. General Office, Cleveland, Ohio.

BRANCHES:

Boston, Mass.—Studebaker Bros. of New York. 1020 Boylston Street. CHICAGO, ILL.—Studebaker Bros. Mfg. Co. 378-388 Wabash Avenue. DALLAS, TEXAS—Studebaker Bros. Mfg. Co. 517-319 Elm Street.

Denver, Coto. Studebaker Bros. Mfg. Co.
1711 Tremont Street.
Kansas Ciry, Mo. Studebaker Bros. Mfg. Co.
18th and Hickory Streets.
New York Ciry- Studebaker Bros. Co. of New
York, Broadway and 48th Street.
Philadelphia, Pa., Studebaker Bros. Co. of
New York, 330 North Broad Street.

PORTIAND, ORE. Studebaker Bros. Co. Northwest, 330-336 East Morrison Street, SanFrancisco, Cal.—Studebaker Bros. Co. of California, Mission and Fremont Streets. Seattle, Wash.—Studebaker Bros. Co. Northwest, 308 First Avenue, S.

Digitized by Google.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . . 10 Cents Foreign Subscription \$4.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

AT Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

New York, March 19, 1908

Unworthy Action of the A. C. A.

Not many unbiased men will waste much sympathy on or lend much support to the Automobile Club of America in its withdrawal from the American Automobile Association. It is big enough and strong enough, and should be broad enough to be above petty contention and personal grievance. Not one statement that has issued from the little coterie responsible for its action, since the present situation was precipitated, has served to make the club's position the more admirable. Its manner of "wishing the A. A. A. every success," while apparently being the retort courteous made snakelike by the enclosure that accompanied the "wishes"—an enclosure reciting the withdrawal of another club in an entirely different State and with which the A. C. A. had nothing to do. The coterie's efforts to make it appear that the legislative interests of New York City are separate and apart from those of the rest of the State

likewise smacks of insincerity and are farfetched and without merit.

The Motor World scarcely can believe that the action of the directors of the A. C. A., however binding on the organization as a whole, represents the sentiment of the general membership; therefore we refer to "the coterie," which probably is more nearly correct. The action of the club is similar to the action of the small boy who is mad and "won't play, so there now!" It is plain to any one with half an eye that some large man's dignity has been offended, or that his self-conscious worth has been suffered to pass without proper appreciation and that he is "getting even" for the slight.

What the club will gain by holding aloof and flocking by itself and refusing to cooperate, is beyond understanding. It certainly is not a national organization and never can be recognized as such; and it is very many years since it was the "whole thing." It as certainly cannot attempt legislative effort without coming into conflict with the rest of the State and thereby causing chaos and defeating the best interests of automobiling; and as the State law governs the city ordinances, how it can serve even local interests is problematical. The fact of the matter is that the A. C. A. is in no enviable position and is hard pressed for logical explanations or excuses. Its action is unworthy of it; it is a smudge on an otherwise honorable record and each attempted explanation serves to make the smudge worse. Only one defense is possible-that the club needs the money expended for dues; and the club itself has cut away that prop. In the matter of official representation, the A. A. A. always has recognized the club handsomely, and if it were not for the fact that several New York automobile writers are possessed of jealousy or personal grievances of their own-apparently chiefly because one or two of their craft have office or influence in the A. A. A.-it is doubtful if one pen would write even a labored brief for the Automobile Club of America.

The situation, however, adds force to what the Motor World persistently has pointed out to the A. A. A., i. e., that club membership is closely akin to the house built on shifting sand. As in the present case, the withdrawal of any club may be brought about by any strong member with a grievance, or by the very human conclusion, reached sooner or later, that it were better to save large lump sums paid out of

a club's treasury. The Buffalo club, now the bulwark of the New York State Association, is just as likely to be ultimately so affected as any other unit of the A. A. Each withdrawal works mischief and spreads far reaching misconception. Many people reach their conclusions from big headlines and when the latter announce "War" or "Disruption," as in the present instance, that is the idea that will most generally prevail. Individual membership is the most lasting foundation. The A. A. A. should be wise in time and be not misled because of present prosperity and because "members in blocks" come easiest.

The Motor and the Buggy.

Because the high wheeled motor buggy is even yet regarded in many quarters a sort of unsophisticated cross between a wagon and a motor car, the fact is not generally appreciated that it presents certain problems of design which are as novel, as they are distinct from those which have influenced the development of the purer type of car. Such is the case, however, and among the builders and owners of these useful vehicles sharp discussions are arising as to the respective merits of this or that system, which are distinctly reminiscent of the early days of the automobile itself—and some of the later days as well.

One of the questions which already is arising for argument, and which promises to be the turning point of heated controversy in the future, relates to the old question of engine position. Primarily, the motor buggy being, in a sense, an assemblage only, of motor, transmission and carriage, the "works" were most conveniently located underneath the body, or within it, according to circumstances. The traditional position is thus the same as with the automobile proper. A newer school, following the reasoning which led to the adoption of the forward position for the engine in that case, has also employed a front mounted engine for the motor buggy. In this connection some of the most advanced and perfect mechanism yet applied to this purpose has been utilized. The respective merits of the two systems would appear to be the same as with the heavier and lower wheeled automobile. The students of the matter hold that such is not the case.

The arguments advanced in favor of the rear mounting of the power plant as against the front, are two-fold. It is claimed, first, that with the forward position of the en-

gine, the vehicle is inclined to skid unpleasantly because of the concentration of so much dead weight in front, and that even when running on a perfectly straight course, there are times when it tends to "wag its tail," metaphorically speaking, and to an unpleasant degree. Second, it is claimed that because of the great diameter of the driving wheels and the low resiliency of the solid tires, the wheels tend to bound and skip over uneven surfaces, thereby cutting down the traction and rendering the propulsive effort less continuous than when greater adhesion is secured by placing the motor further to the rear. It is admitted, however, that neither of these tendencies is manifest at speeds below fifteen miles an hour.

On the other hand, the advocates of the front mounting for the power plant claim better guidance with more even distribution of weight, a more satisfactory and economical disposition of the organs of transmission, an easier riding vehicle, and altogether a more convenient one in point of luggage capacity and accessibility of mechanism. As yet too little is known of the properties of this type of vehicle to warrant the outsider in taking up a definite position on either side. But it is enlightening to note that such a conflict of opinion exists where none had been suspected. The outcome will be watched with interest.

Federal Aid for Road Improvement.

To the man unversed in constitutional law, it always has seemed that if it were legal to build national highways in the time of our forefathers, it still is legal to do so; it always has seemed that if it is constitutional for Congress to expend money for for the improvement of rivers and harbors, it is legal for it to expend money for the improvement of the common roads.

If the greatest good for the greatest number is one of the aims of government, there is no room for doubt that as between the river and the road, tens of thousands will be served by the road while individuals are served by the river. If the river promotes commerce, the road promotes both commerce and the individual prosperity and personal well being of each citizen. It would seem therefore that Federal aid cannot serve more persons or purposes, or better ones, than by application to the improvement of the roads. It is aid of the sort to which even the most ardent State's rights advocate hardly will object. If it is not constitutional, it should be made constitutional.

THE MOTOR WORLD

These thoughts are suggested by the bill which the National Grange has caused to be introduced into Congress. It would have the Federal Government appropriate \$50,-000,000 for road improvement. As appor tioned over a term of years, the amount is pitifully insufficient, but accepted as an entering wedge and as marking a beginning, it is a big stride in the right direction. The bill should be pressed home. Every organization should place its strength behind it. Led by the Grange, the cry of "special interest" scarcely is likely to be raised. Every effort brought to bear will be, therefore, more likely to achieve result. Men elected to public office appear to have a peculiar regard for the farmer vote and they are therefore likely to give more heed to the Grange's bill, than otherwise would be the case.

The Rising Against Frelinghuysenism.

It took the New Jersey worm a long time to turn, but it appears now to have turned in no uncertain fashion. The fight which is being waged against Frelinghuysenism is positively inspiring. That possibly astute politician apparently considers automobilists "good things" fit only for "plucking" and it is high time that he was shown the error of his estimate. The Newark trade association is pointed in the right direction in seeking to pledge their legislative representatives against Frelinghuysenism, and all it stands for. The average politician is fearful chiefly of organized effort and when organized effort seeks the defeat of a candidate at the polls, it is then that it becomes mighty. The automobilists may not be able to change the result of a State or a city. but they must hold the balance of power in more than one ward or precinct, and that power should be brought to bear.

Let Well Enough Alone!

Why in thunder do not the New York State Automobile Association, the Automobile Club of America, and Albert Shattuck let well enough alone? The New York law has stood the test and stood it well. It requires no tinkering of any sort.

Why should any man or any organization agree to an increase of fees, even for road improvement? It is wrong in theory and wrong in practice. It is special legislation; it is the sort of legislation the organizations should oppose as a matter of right and of principle; and if it means fight, the fight may as well begin in the Empire State. New for road construction; the automobilists will

COMING EVENTS

March 15-April 1, Omaha, Neb.—Omaha Automobile Dealers' Association's annual show in the Auditorium.

March 18-19, Savannah, Ga.—Savannah Automobile Club's stock chassis race.

March 18-24, New Haven, Conn.—New Haven Automobile Dealers' Association's show in Music Hall.

March 18-25, Rochester, N. Y.—Rochester Automobile Club's show in new Convention hall.

March 23-28, Indianapolis, Ind.—Indianapolis Automobile Dealers' Association's show week.

March 31-April 4, Salt Lake City, Utah—Automobile show in Auditorium skating rink.

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

April 6, 7 and 8, Denver, Col.—Annual show in Mammoth skating rink.

April 6-11, New York City—New York Automobile Trade Association's carnival week.

April 16-18, Memphis, Tenn.—Automobile show promoted by the Automobile Dealers' Association of Memphis, in the Auditorium.

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

May 5-6, Harrisburg, Pa.—Motor Club of Harrisburg's second annual endurance run. May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

York State already has voted \$50,000,000 bear their share of the taxation. It is not fair that they should bear more than their share. It is not proper that their chosen or self-chosen leaders should consent to do so.

If fifty millions are not enough for the work, let more millions be obtained. But let the burden be distributed equitably. which is to say, legally. The cry that automobiles injure the roads is little more than an echo of the cry that bicycles injured the roads, which cry soon was dissipated in thin air. No cycling organization and no politician would dared have advocated a special tax on bicycles, when the cry spent itself. If there are automobilists who desire to contribute to betterment of the roads, it is their privilege to do so. It is not right that contribution in the guise of special taxation be wrung from them by process of doubtful law. It is mischievous process.

A. C. A. GETS MAD AND WONT PAY

Withdraws from A. A. A. and Will Flock by Itself—"Too Much Shattuck" the Basis of the Trouble.

The A. A. A. and the A. C. A. are "out." It has been no secret that there long has been friction between the two bodies—the American Automobile Association and the Automobile Club of America—and as only two weeks since it was stated publicly that the big club would break away from the national organization by failing to renew its membership when the year elapsed, official announcement of the fact, which was made late last week, caused no general surprise.

The announcement followed the annual meeting of the New York State Automobile Association at Buffalo on Thursday, at which Oliver A. Quale, of Albany, and Chauncey D. Hakes, of the same place, were re-elected president and secretary, respectively. President Hotchkiss, of the A. A. A., came to New York immediately after the meeting and issued this statement:

"While the differences between New York's local club and the State association proper, which is a body of forty clubs, including one at Buffalo as large as the local club here, have been brought to a head by the contemplated action of the State body, requiring the New York club to pay dues on a per capita basis of its full membership, the breach dates well back and was originally opened by conflict over matters of State policy in legislation.

"It is perhaps proper for me, as president of the American Automobile Association, to say that I do not regret the resignation, but welcome it. It is high time that motorists understand whether a mere name adopted in the infancy of the motor vehicle in this country, and which has since become a misnomer, entitles any local body in any city, no matter how great, to lord it over hundreds of other clubs in other parts of the country. Indeed, the time has now come to determine whether the American Automobile Association represents those motorists or whether they are to be represented by a small clique of gentlemen who manage a local social club. I, therefore, hail the issue and have no doubt of the result."

Early this week, the Automobile Club of America made official answer to Mr. Hotchkiss in this language:

"The board of governors of the Automobile Club of America were surprised to read in the public press the statement attaributed to President Hotchkiss of the American Automobile Association, that he 'welcomes the withdrawal of the Automobile Club of America' from the organization of which he is president, and 'hails the issue.' This statement, coming from a man of President Hotchkiss's judicial attainments, is the

more surprising, because the Automobile Club of America is not aware that any 'issue' exists. The club withdraws from the affiliation with the American Automobile Association for the purpose of more effectively carrying on its numerous activities, not only for the benefit of its own members in all parts of the country, but also for motorists generally. The question of 'raising the dues' was not known to the board when it decided to withdraw, and so had no bearing on the decision.

"The Automobile Club of America, the first club formed in America and immediately constituted the sole recognized American representative of all the foreign Automobile clubs, which it still is, fought and won the early battles for motorists in this country, and needs no apology for its name. To these early struggles the American motorist is largely indebted for the rights which he now enjoys on the public highway, in the parks and on the ferries.

"The Automobile Club of America has always believed in fostering inter-club relationship by interchange of club privileges. It wishes the American Automobile Association every success in all its endeavors that make for the good of the sport of motoring, and will at all times be glad to render such assistance to this end as may be within its power."

Accompanying this official answer, which was sent to the press, was a short notice reciting that the Massachusetts Automobile Club had refused to reconsider its resignation from the A. A. A. It is presumed that the Automobile Club of America included the item regarding the Massachusetts club as evidence of the good faith contained in its statement that it wished the A. A. A. "every success!"

While the item of dues has been permitted to cut a large figure in the rumpus, it is really of minor importance. It appears that until last week's meeting the annual dues of the New York State Automobile Association were at the rate of \$1 per year, except that when a club attained a membership in excess of 500 members, no dues were paid upon such excess membership. Two clubs, the Automobile Club of Buffalo and the A. C. A., were the only ones to profit by the excess membership clause. and recognizing its unfairness and inconsistency the Buffalo club proposed the amendment, making the dues \$1 per member regardless of a club's strength. This change in the constitution cost that club \$720 additional and had it remained within the association, the A. C. A. would have had to pay a total of \$1,237 instead of but \$500 as before. There were those who hung the withdrawal of the A. C. A. on this peg, but as a matter of fact the dues had little, if anything, to do with the matter. though New York, both city and State long have enjoyed a great preponderance of representation on the A. A. A. official slate and on its committees, many of whom were drawn from the A. C. A., there are those

in the club who apparently cannot reconcile themselves to the fact that it is not the "whole thing" or who cannot bow gracefully to the will of the majority, and this is the real basis of all the trouble. Chief of this coterie is Albert R. Shattuck, the first president of the A. C. A. and who ever since has been the man behind its scenes. His influence pervades the entire organization. Two years ago the club wanted to tinker with the State law. They had a rather drastic bill ready for introduction, but the State association very properly blocked it, and has continued to block it, which did not contribute to the good feeling. This year the State association prepared a new bill ... and had its machinery well oiled, when Shattuck turned up at Albany with diverging views and ideas of exorbitant fees. and upset all arrangements and made it appear that there was lack of harmony among the automobilists themselves. Quite naturally the association resented Shattuck's action and the A. C. A.'s withdrawal followed.

Not every one in the Automobile Club of America sympathizes with its action, and not a few members will continue their allegiance to the A. A. A. in their individual capacities. Among them are Jefferson Du Mont Thompson, chairman of the A. A. A. racing board and W. K. Vanderbilt. Jr., who also is a member of the board.

When Secretary Butler of the Automobile Club of America was asked to supplement the statement that had been given out over his signature, he responded that there was nothing more to be said.

"Do you consider the A. C. A. in the light of a national organization?" inquired the Motor World man.

"Only insofar as we will continue doing all in our power for automobilists everywhere, as we always have done," was the response.

"Do you intend to build up a national organization?"

"That subject has not been taken up. For the present nothing to that end will be undertaken. What may happen later I don't know. But if such a step were contemplated I do not think it would be wise to discuss it until the plans were formulated; the future will take care of itself."

"But should you determine on such a proceeding," persisted the interviewer. "would you not be handicapped by the section of your constitution limiting your membership to 2,000?"

"That is easily overcome. A vote would alter it."

"Do you think that the best interests of the automobilists would be served by two organization?" he was asked.

"I am not prepared to answer. If many glubs should leave the A. A. A. there might be need of an organization of wide scope."

"Your statement, issued yesterday, says that you have withdrawn from the A. A. A. for the purpose of carrying on more effectually your numerous activities. What do you mean by that?"



"Well, take the subject of legislation. We had only two members on the A. A. A. legislative committee, and they found it to be impossible to convince the members from up the State that conditions in this part of it, say within a hundred miles of New York City, were different from those further north. Rochester, Syracuse, Buffalo, etc., had no experience with police traps and were desirous of standing pat on existing laws when we needed new legislation for our own preservation or protection, if you want to call it that. As free agents we will be better able to represent the metropolitan automobilists and actually our first duty is to them."

"Besides legislative activity, what else?"
"We will continue our road signs work
and keep up our tour bureau, of course."

"Should you eventually decide to become a national body, would you organize something new or affiliate with some body now in existence?

"I can't say, because I don't know. That would have to be a question for the future to settle."

"Did the question of the increased dues have anything to do with your withdrawal?"

"Not in the least. Personally, however, I think that putting the same money into road signs will be of more benefit to motorists than paying it into the organization for dues. But I want to add this," continued the secretary, as the interviewer prepared to leave. "This club bears no animosity in any way to the A. A. A. We hope they will succeed, and we will do anything we can to aid them in any and all efforts for the good of automobilists. Our withdrawal is for our own good only and is not to be construed as a move against the organization in any way."

As Secretary Elliott of the A. A. A. was in Savannah, and no one in his office was authorized to discuss the subject, nothing additional could be obtained from that source.

When the subject was broached to a man who stands on middle ground and who is so placed that he is able to be unusually well informed, and who is unbiased, he did not hesitate to express his opinion.

"It is simply a case of too much Shattuck," he said in a tone in which there was a note akin to disgust. "Shattuck deserves a lot of credit. He is a hard worker and a mighty able one, but he has a personality that is a liability rather than an asset. As its president and since, he did much to make the A. C. A. what it is to-day, and though he may mean all right, it's hard for any one to be convinced of his good intentions. The A. C. A. is unpopular in many directions, and all because Shattuck's personality has permeated everything. The club house is a 'morgue,' and so full of flunkeyism that few men go there more than once if they can help it. There is about Shattuck a defined paternalism that doesn't appeal to Americans, and other clubs resent this same paternal attitude that the A. C. A. assumes. Quale and Hotchkiss, of the A. A., convinced the legislative body that the sliding fees from \$3 to \$15 was all the motorists could stand or would stand, but up bobs Shattuck, who says that \$4 to \$40 would be about right. As a result, some angry legislators and some angrier A. A. A. representatives. And Shattuck is the man who says foreigners are better than Americans. And there you have it! Why even the A. C. A. is tired of him and sooner rather than later, I think you will find that he and Dr. Skaats Wheeler, who helps him 'run' the club, will find their stools moved into a back row. Then you'll see more trouble and lots of it. There will be no new club, as has been prophesied, but a revolution in the old club itself."

At this point it was suggested that Secretary Butler's position could not be likened to a bed of roses.

"I should say not," came the quick response. "I wouldn't take Sam Butler's berth for \$500 a week payable in advance—and incidentally," he added, "I'd want at least that sum for standing for Shattuck and his foreign airs and domineering ways, to say nothing of a few other individuals and incidents that are part and parcel of the job of secretary of the A. C. A."

To those who do not know Mr. Shattuck, it will be illuminating to say that in signing hotel registers, it was his custom to inscribe himself: "A. R. Shattuck and servant." The "servant" was the human being who acted as his chauffeur.

Big Penalties in Milwaukee Contest.

Held at a time of the year when road conditions are worst, it is not surprising that the three days' reliability contest promoted by the Milwaukee Automobile Trade Association on Tuesday, Wednesday and Thursday of last week, March 10, 11 and 12, did not prove the success for which the promoters confidently had hoped. Only eight cars, divided into three classes, started from Milwaukee on Tuesday and not one finished on Thursday with a perfect score. The best record was made by Ed Sanger, who drove a four cylinder Maxwell in the class for cars costing \$1,800 and under, and who finished the three days' run with a penalization of 935 points.

Oshkosh was the first day's destination and the eight starters left Milwaukee by classes in the following order: Cars selling at \$1,800 and under-Frank Roessler. Rambler; A. J. March, Reo; Robert Zastrow, Jackson, and Ed Sanger, Maxwell. selling from \$1.800 to \$3,000-L. A. Finch, Thomas-Detroit and Edward Collier, Rambler. Cars selling above \$3,000-S. W. Hartley, Cleveland, and Hal K. Sheridan, White. According to reports from the Beer City the roads encountered between Milwaukee and Oshkosh were frightful, but notwithstanding the prevalence of deep mud a majority of the starters reached there without great penalization. Zastrow was penalized 25 points for breaking a hood seal and 90

points for cleaning a spark plug, while Collier was charged 25 points for breaking the transmission seal and subsequently 175 points for repairs. All the others had perfect scores.

The 160-miles run from Oshkosh to Beloit on Wednesday played all kinds of havoc with the remaining perfect scores. Not one of the cars reached Beloit on time, which was not strange in view of the deep rivers of mud and water that were wallowed through. The worse parts of the run were between Ripon and Brandon, and between Madison and Janesville. In many places the roads were so bad that the cars put through fields and woods to escape the deep slough that filled the roads. Sanger, who finished the first day with no points against him, had trouble with one of the springs that cost him 550 points in addition to an additional debit of 185 points for being over three hours late. Zastrow lost a little over 200 points for minor repairs and was charged 480 points for being that many minutes late at Beloit. A. J. March lost 13 points for repairing a bearing and was charged for breaking the seals of the gasolene tank and of transmission nine times. Sheridan lost 150 points for minor adjustments and 230 points for arriving late, while Hartley suffered a broken spring, which cost 1,940 points, in addition to 515 points for being late. Finch had trouble with the driving shaft of his car and was debited 3,000 points, while Collier was laid up all day with a broken pinion.

Bespattered with mud six of the original starters checked in at Mliwaukee on Thursday after a hard day's run from Beloit. Hartley was the first to finish, followed by Sanger. None of the drivers experienced as much trouble on the last leg of the run as they did the day previous. All the cars but one were penalized, but the loss in points was nominal. Sanger was the only driver to finish the day's run without loss of points. Collier, in the Rambler roadster, waited all day for replacements from the factory and arrived in Milwaukee on Friday, 22 hours 45 minutes late. The observer's card showed no record of the time spent upon repairs so it was only charged 1,365 points for being late. The other Rambler had not reported when the committee announced the results. The total penalties as announced were as follows:

Ed Sanger, Maxwell, 935 points; Robert Zastrow, Jackson, 965 points; A. J. March, Reo, 1,085 points; H. K. Sheridan, White, 1,750 points; S. W. Hartley, Cleveland, 2,680 points; L. A. Finch, Thomas-Detroit, 4,823 points; Edward Collier, Rambler, 1,365 points.

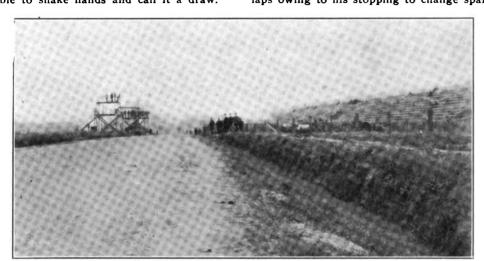
Bridgeport Wants Vanderbilt Race.

It transpires that Bridgeport, Conn., officially is in the field for the Vanderbilt cup race this fall. St. Louis and Savannah were already known to be anxious to provide a course for the race, but Bridgeport's candidacy was made known only last week.

SPIRITLESS SPORT AT SAVANNAM

Lytle and Salzman Take Honors from Thin Fields—But Georgia Turned Out a Great Crowd.

Unless the "big" race at Savannah to-day turns the balance, the promoters of the speed carnival on the Florida beach and the road races on the Georgia roads will be able to shake hands and call it a draw.



GRAND STAND AND OFFICIAL STANDS ON THE SAVANNAH COURSE

The road races typify the A. A. A. sentiment; the flights on the wave washed sand represented the A. C. A. antagonism. Held in adjoining states and although far from the center of disturbance, it has been an open secret that each side has viewed the efforts of the other with more or less jealous eyes. The Florida sandfest came near to being a fizzle. Entries were few, starters were fewer, and finishers were almost, if not quite, as scarce as hen's teeth. These conditions were paralelled by the Savannah Automobile Club's road races, for stock chassis, the first of which were decided yesterday, 18th inst.

The first race—the one for runabouts—over the level but picturesque and well oiled 18 miles course, hung with moss in many places, was won by Herbert H. Lytle, driving a 30 horsepower Apperson. He completed the 10 laps—180 miles—in 3:35:41. Only two others started and but one of them finished. Lytle gained more than a full lap on J. B. Lorimer (40 horsepower Thomas-Detroit). The third starter, L. J. Zengle (50 horsepower Pennsylvania), broke a rear axle on the second lap, after placing to its credit the fastest circuit, 18:54.

In the second race, 180 miles for stock cars not exceeding 575 cubic inches piston displacement, George Salzman (70 horse-power Thomas "Six") finished alone in 3:02:25. The only other starter, F. W. Leland (60 horsepower Stearns "Six"), was put out of the running on the fifth lap by a broken connecting rod.

It follows that there was mighty little of real interest or excitement in either race.

The breakage of the axle of the Pennsylvania in the runabout race after having a lead of 1 minute 35 seconds over the Apperson, gave the driver of the latter car clear sailing for the remainder of the race. The consistent driving of Lytle was one of the chief features. He drove seven of the ten laps in a little over twenty minutes each. His time varied slightly in the three other laps owing to his stopping to change spark

16:51. The time of the car by laps follows: 17:35, 17:02, 16:51, 18:00, 21:45, 17:53, 17:37, 17:23, 19:33, and 18:49.

Savannah's interest was real interest. The city council had declared the day a holiday and the mayor, with other city officials, was present. A monster crowd lined the course and the grandstand, which will seat 5,000 persons, was full to overflowing. The stand was alive with flags and bunting.

The judges' stand on the opposite side of the track was covered with flags of different nations, while club flags and the emblem

mer's time for each of the nine laps fol-

lows: 23:45, 24:21, 26:05, 26:55, 23:57, 20:02,

The cars were sent away at two minutes'

intervals in both races. The Thomas car

was first away in the second contest, but

at the finish of the first lap the timing

showed that the Stearns car had a lead of

40 seconds. There was intense excitement

when it was announced that the latter car

had broken down on the back stretch, as it

gave the Thomas car a walkover. The fastest lap of the day came in the third circuit of the 18-mile course. Salzman drove at better than a mile a minute, the time being

24:33, 25:09, and 22:11.

The judges' stand on the opposite side of the track was covered with flags of different nations, while club flags and the emblem of the American Automobile Association were conspicuous. The soldiers paraded in groups through the streets on their way to the course, and every kind of conveyance



PICTURESQUE STRETCH OF THE MOSS-HUNG COURSE

plugs and to take on gasolene. The ill fortune of the game seemed to follow Lorimer in the Thomas-Detroit. The ripping off of a tire caused the loss of many precious minutes, and later he had to stop again owing to carburetter trouble.

Increasing his lead on each lap Lytle succeeded in gaining a full lap before the race was over. Lytle's time for each of the ten laps follows: 20:29, 20:27, 20:20, 20:32, 26:42, 20:32, 20:20, 24:04, 20:56, and 21:19. Lori-

seemed to be headed that way.

The grandstand was placed about 25 yards back from the road, and along the course for a half mile each way was a wire screen fence. A brass band kept the crowd in humor when the cars were out of sight. The course was policed by 300 soldiers, 60 policemen and 50 flagmen.

To-day, the big race, 360 miles, for which there are eight entries, will occur, and of course a "bigger time" is anticipated.



FRELINGHUYSEN IS "ACGRIEVED"

Thought Automobilists Would Seek to Compromise, but They Did Not—New
Jersey Fight Grows Warmer.

It appears probable that when he appeared at the recent conference of New Jersey automobile clubs, Senator Frelinghuysen did so in the role of professional pilitician. He wore his stock smile and was as notable for what he did not say in defense of his "pickpocket" bill as for what he did say. At that time he was before a considerable crowd and at such times the professional politician usually is very circumspect. A few days later when two representatives of the New Jersey Automobile and Motor Club visited him in the insurance office in New York, where he earns a part of his living, they discovered a Frelinghuysen of another sort. He was disposed to be assertive, but he said enough to make fairly plain that the best he hopes to accomplish is to effect a compromise of some sort. He did not, however, obtain much comfort from the club men. When they left him, they were more than ever determined to fight Frelinghuysenism and all that it stands for.

"When Mr. H. A. Bonnell and myself interviewed Senator Frelinghuysen in his office in New York," said W. C. Crosby, chairman of the New Jersey clubs legislative committee in reporting the result of his visit," it was made clear that to get what they want, they have a fight on their hands which means fight from now to the end of election. The Senator seems to feel himself aggrieved because at the meeting of the automobilists, held in the local club on Friday of last week, he claims that no opportunity was given him to meet the automobilists in a spirit of compromise, and that no effort was made on the part of the legislative committee to meet on mutual ground.

"The Senator unalterably opposes any change in the speed limit, and while he claims that the license fees as proposed are excessive and too high, yet he places the responsibility of such license fees as have been suggested and proposed, on the Governor, and he further claims that to extend a tourist privilege in the State of New Jersey would bring about a condition that would not result to the benefit of New Jersey citizens or its highways.

"In fact, in the discussion, matters assumed such a serious position that the interview was closed by the request of the Senator himself, by using the expression, 'the interview can no longer be permitted'; the cause of taking such a position being that he was unaware that the Governor at any time stated to him, or showed to him by his conversation, that he was in favor of an extension of the speed limit, while the chairman of the legislative committee stated

absolutely and unqualifiedly that the Governor had so expressed himself at the general conference in Trenton with the Governor, or by his expressions led those who heard him to the conclusion that he was in favor of a change in the speed limit, or in extending the speed limit to 25 miles an haur, or possibly 30, claiming that it was reasonable. While the Senator asserted that he did not hear any such expressions on the part of the Governor, the chairman of the legislative committee claims that the Governor was addressing directly the Senator in making his remarks or arguments in connection with a 25-mile-an-hour speed being reasonable, and one which would be more in accord with the use of the highways by automobilists, and yet be with perfect safety. The Senator unqualifiedly denied this, and the issue was taken, and it is a matter that can be very readily decided by the Governor himself, or by those present at the interview.

"In connection with the tourist privilege, if the autoists of this State are to secure for non-resident tourists the sovereign right of touring over the highways of the State, without paying a tax, they will have to fight for it, or secure it by the exercise of the constitutional right invested in Congress, and to that end it is most earnestly hoped that the great body meeting in Washington, which now has the proposed Federal license bill before it for consideration will find it to the interests of these United States not to permit individual States to erect bars and obstacles to prevent non-resident citizens who have conformed to the laws of their own State from enjoying the privilege of touring through or riding through a sister

"In regard to the question of license fees it has become an absolute necessity, and the automobilists may just as well face the situation to-day as at any other time, to fight the constitutionality of a law which permits the State Legislature to exact under the cloak of a registration or license fee a double taxation, which it is admitted has produced to the State in the last year something over \$90,000, and which they deliberately propose with the distinct intention of making the department raise \$200,000, it being admitted that personal taxation is already assessed against the owners of automobiles, and in the city of Newark personal property is assessed and automobile property is assessed also under a distinct and separate item.

"The Senator was told that unless the automobilists received some concessions in regard to speed, in regard to a tourist's privilege, and a license fee not in excess in any case of \$10, that not only every effort would be made to defeat the proposed legislation in the two houses at Trenton, but the automobilists generally, the trade associations, the boards of trade and the manufacturing interests would be enlisted, together with the interests of the hotel associations, to fight the constitutionality of the law, on the

ground of double taxation under the cloak of license or registration fees, and also to test the constitutionality of any law which requires that an automobilist, having conformed to the laws of his domicile State, shall be required to pay for the privilege of using the highways of another State, which is contrary to the sovereign right of every citizen of this great country, and in addition to this, every legitimate means will be used to defeat the Senator in his campaign in the fall for re-election. In order to get fair play from the automobilists' standpoint, every foot of the way has got to be fought; and as it now stands, the Senator states that he is going to have a conference with his fellow Senators and see exactly what position the legislators themselves will adopt, practically intimating that what they say will be the result, and the automobilists' or the manufacturers' interests will not be considered.

"In regard to the veracity, that was questioned on the part of the Senator, as to what took place at the conference with the Governor, or the representations made, they can be easily established by those who were present, and an effort will undoubtedly be made to provide such substantiation; that when a Senator misrepresents he is doing unqualifiedly and unjustifiably what he has no right to do."

Dealers to Fight Frelinghuysen.

With many out of town members included in the large attendance the New Jersey Automobile Trade Association, at its annual meeting in Newark, Thursday evening, 12th inst., gave full discussion to the proposed new automobile legislation. The association will fight the amendments to the existing law proposed by Senator Frelinghuysen, but will support the clause in the bill providing that lights shall be displayed on all vehicles at night. It was announced that the entire Hudson county delegation in the legislature promised to vote against the Frelinghuysen amendments.

All the old officers were re-elected for another year, while one new name was added to the executive committee. The officers are: George Paddock, president; J. W. Mason, vice-president; W. H. Ellis, secretary, and R. A. Greene, treasurer. The executive committee is made up of C. R. Zacharias, of Asbury Park; G. E. Blakeslee, of Jersey City; G. M. Russling, of Paterson; Inglis M. Upperson, F. L. Martin, Leonard B. Zusi and M. O. C. Hull.

Cop Sues Motorist for Damages.

Knocking over a policeman by running into him with an automobile may entail heavy expense. John J. Callahan, a former policeman of Pelham, has just brought suit in the Supreme Court at White Plains for \$50,000 damages for injuries against William McCord, an automobilist of Greenwich, Conn., who, Callahan charges, knocked him over with his automobile when the policeman was trying to arrest him for speeding.



AMERICAN ENTRY 500 MILES AREAD

Is Now Traversing Nevada—French Motobloc Quits "Race" at Omaha—Queer Beatures of the Contest.

The New York-Paris "race" has penetrated as far as Nevada, the sole American entry, the Thomas car, which now is being piloted by Harold Brinker, having put up at Ely in the Sage Brush State last night. The day's run was 141 miles, the total distance from New York being 2,859 miles. The Thomas's nearest competitor, the Zust, At Omaha he said that, as he understood the rules of the "race," the contestants were not to be detained in the United States beyond three weeks and might take train on March 5, to be at Seattle on March 10 or earlier.

"Now," he added, "we have been on the way five weeks and have spent or strewn dollars by the road because the car has at each moment needed assistance to get out of the mire, snow, and mud in innumerable instances.

"On our part we have not emphasized the thefts by many people of our possessions, and when we object they tell us it was for the snow, mud, shallow streams and over rail-road cross ties. The car reached Evanston, Wyo., to which it was run on the tracks of the Union Pacific R. R. as a train, with the chief dispatcher of the U. P. in the role of conductor, the American car was able to avoid the impassable snow drifts on the road from Carter, but between this last named town and Church Butte, the roads, thick with soft mud, had to be used. On the 14th they entered Utah and encountered the worst roads of the trip from New York. The railroad tracks were again used to the detriment of the tires, three of which were destroyed.



THE AMERICAN ENTRY MIRED IN THE MUD NEAR MEDICINE BOW. WYO.

is 500 miles behind—at Granger, Wyo.; the De Dion, which was laid up at Grand Island, Neb., is 1,200 miles behind the Thomas, and the Protos, which arrived at Columbus, Neb., is 70 miles in the rear of the De Dion.

The story of the week is largely the story of other weeks—a story of struggles through snow, mud and water, with the American car far in front. The foreigners have had frequent recourse to the Union Pacific railroad repair shops, and the remarkable "race" spectacle has been presented of a car waiting three days for the arrival of a certain brand of tires and of other cars being loaded on railroad cars and shipped ahead for repairs and then shipped back again to resume the "race" where the breakdown occurred.

The biggest development of the week, however, was the apparent quitting of the French Motobloc. Mr.Godard, who is in charge of it, and who it is said is badly wanted in Paris to explain certain financial transactions during the Paris-Pekin "race," has found the strain too great for his pocket-book. The constant repairs and other "charges unforescen," as they are described by Godard, induced him last night to load his car on a freight train at Omaha, where it had been shipped by rail and remained three days for repairs. The Frenchman says he means to journey by rail to San Francisco.

purpose of getting souvenirs. Then I cannot continue to carry along the Motobloc on account of charges unforseen and without end."

The Thomas car, in charge of E. Linn Mathewson, who succeeded Montague Roberts as its driver, rolled into Ogden, Utah, on the 15th, where he relinquished the wheel to Harold Brinker. The journey across Wyoming had been a struggle through



BUCKING THE SNOW IN WYOMING

Having run day and night for 25 hours, they entered Ogden completely fagged out. Of the last 50 hours Mathewson had been at the wheel for 47 of them. Snow and mud had been continually encountered, and he was glad that his work had finished as Ogden was the place where Harold Brinker was to succeed him as driver.

Until 4 o'clock of the following afternoon the car was given a general but hasty overhauling. At this hour, followed by a procession of the Ogden automobilists, the trip was resumed with Brinker driving. By way of variety several sand storms were run into and tortured those of the crew who did not possess good goggles; good roads were encountered, however, and no stop of any length was made until Cobre was reached, 182 miles from Ogden. The hardship of this journey lay in the fact that it was made perforce on empty stomachs. At Montello, after a run of 162 miles, the food that was obtainable was not fit to east, 20 miles further, in Lucin, Utah, the meal consisted of salt mackerel and tea. Cobre, however was able to furnish a good square American meal. Meanwhile the foreign cars were having their own troubles far be-

After waiting 24 hours at Paxton, Neb., for a sprocket and chain the Zust made the trip to Cheyenne, Wyo., without incident.

Sirtori gave his Italian car on overhauling in Cheyenne, preparatory to crossing the Rockies. In that city the hospitality of the natives so impressed Haaga, the German mechanician on the Italian car, that he declared his intention of returning and making it his home after the car reached Paris. The overhauling in the U. P. shops was thorough and the 57 miles to Laramie was quickly traveled. After a stop for lunch they proceeded to Dana through heavy roads, which grew much worse as Medicine Bow was approached. When 5 miles from this town the car was abandoned until horses could be procured to drag it on.

Although the lighter Thomas had been able to cross the North Platte river on the ice, Sirtori was afraid to risk his heavy car in an attempt to do likewise. He finally ar-

was made evident. It waits even for tires from Europe. After a three day's wait the tires came and the car was driven the 100 miles to Dennison, in rapid time. Here another banquet greeted Lieut. Koepper, whose progress has been marked by these convivial spreads of various German societies. In one of his speeches Koepper remarked: "I have a good car, in perfect condition, able to make good speed, yet I find myself a month on the road and advanced only 1,500 miles. Our main trouble has been tires."

The Motobloc, having received a complete overhauling in Clinton, Iowa, where it had been shipped by train from De Kalb, 80 miles away, was pronounced fit to resume, and Goddard hit on the more or less happy thought of making up the 80 miles by run-

Dr. C. B. Parker, of the Long Island Automobile Club. R. G. Howell, the grand marshal, has appointed the following aides for the various divisions: W. I. Fickling, first division, composed of cars of 1903 and earlier, old racing cars, and the Briarcliff racers; I. H. Manning, second division, composed of dealers' stock models; Alexander Howell, third division, composed of decorated cars; H. E. Wagner, fourth division, composed of commercial vehicles. Each marshal will be allowed to appoint as many assistants as are necessary in his own division.

The exact date of the hill climbing contest has not yet been determined on, but it will be either Monday, April 6, or Thursday, April 9. The earlier date is favored by many on the theory that the contest would



HITTING THE HIGH SPOTS IN THE ROCKIES

ranged with the U. P. to cross on the railroad bridge, so he bumped over the trestle and was encouraged to find fairly good roads on the other side. With the car in good shape and the roads fair, good time was possible and he gained on the American, reaching Granger, Wyo., on Tuesday, after a 30 mile run. As the crew was tired, it was determined to sleep here.

The crew of the De Dion, after traveling without incident for 29 hours with neither food or sleep, determined to spend the night in Missouri Valley, Iowa. On Friday, the 13th, they broke a driving pinion and were forced to spend three days in Crescent, 10 miles from Omaha, waiting for the new parts that were being made in the U. P. shops of the latter city. Starting again on Sunday night. St. Chaffray announced that he hardly expected to catch the Thomas before Alaska was reached. Better roads were found the next day and the trip to Fremont was made with no incident other than an announcement from St. Chaffray that he had found a lot of screws and pieces of iron in the gear case. He presumed they had been put there by a practical joker. Three miles out of Grand Island the DeDion broke a spring and was towed back to await another from Cheyenne.

Hard luck was the portion of the Protus. Having made 38 miles after a day of travelling they reached Ames, Iowa with all tires used up. The character of the race ning back 40 miles and then returning over the same route to Clinton. In this way he did the requisite mileage, but it was not over the prescribed course. However that matters little in "races" of this kind, and the trip was continued to Cedar Rapids, where the solid tires gave way to pneumatics. Continuing the car was lost somewhere and wandered about Iowa until set right by a native after it had been caught in a terrific rain storm which drenched the crew. Tama was reached Sunday night and Ogden on Monday. The heavy roads prevented over 17 miles being done for a whole day's work. Near Carroll something went amiss and the car was shipped to Omaha for repairs. After which Godard practically announced he had had enough and would quit.

Officials Chosen for the Carnival.

Having finally determined that the principal features of Carnival Week are to take the form of a night parade and a hill climbing contest—by day, of course—the New York Automobile Trade Association is now arranging the details of the celebration that is to mark the tenth anniversary of the introduction of automobiles in New York. The parade is to occur on the night of Tuesday, April 7. The officials for it were chosen late last week, as follows:

Judges: President Colgate Hoyt, of the Automobile Club of America; A. R. Shattuck, ex-President Robert Lee Morrell, and serve to open the carnival with an event that would attract wide attention. The Fort George hill, which was first used for a competition last year, has been selected as the course for the climb, the necessary permission having been obtained from the city authorities.

It is believed that the contest will call forth from 50 to 100 entries. The entrance fee has been placed at \$10. The subdivisions include six classes for gasolene machines, an electric class, a steam car class, and a free-for-all. The restriction of the steam cars to one class regardless of price, while the gasolene machines have several classes based on the selling price, has drawn forth a protest from George W. Bennett, manager of the White company's branch. Mr. Bennett holds that the steam vehicle should be admitted on an equality with the gasolene machine in the price classification divisions, but the Carnival committee maintains that it has a right to do as it pleases.

Spain Modifies Frontier Rules.

One of the annoyances of automobile touring in Europe has been lessened by the modification of oppressive Spanish rules enforced on the Franco-Spanish frontier. These rules have been the subject of many protests. That the protests finally have awakened the higher authorities is indicated by an unwonted display of courtesy and leniency by the officials at the frontier.

FEDERAL RIGHT TO REGULATE

Constitutionality of Proposed National Law Argued Before Congressional Committee—Terry Makes Strong Points.

The hearing on the Cocks bill to provide for the Federal registration and numbering of automobiles when engaged in interstate travel was held by the committee on the judiciary of the House of Representatives at Washington, D. C., Thursday, March 12th, This bill, which was prepared by the legislative board of the American Automobile Association, attracted a notable gathering, and while despatches from Washington indicate that the bill will not be favorably considered, it stated that the bill is by no means lost. It is said that the committee adheres to the principle that the licensing of vehicles is solely a police power and therefore purely a state function and not within the constitutional scope of Congress.

Among the representatives of the American Automobile Association present were: William H. Hotchkiss, president American Automobile Association, Buffalo; Charles Thaddeus Terry, chairman Legislative board, American Automobile Association, New York; Frederick H. Elliott. secretary. American Automobile Association, New York; Russell A. Field, secretary, Long Island Automobile Club, Brooklyn; A. G. Batchelder, New York State Automobile Association, New York; C. H. Benedict, Automobile Club of Schenectady; Robert P. Hooper, Automobile Clubs of Germantown and Philadelphia; Paul C. Wolff, Pennsylvania Motor Federation and Automobile Club of Pittsburg; Jacob D. Rider, Lancaster Automobile Club; G. Douglass Bartlett, Quaker City Motor Club, Philadelphia; W. C. Crosby, New Jersey Automobile & Motor Club and Associated Automobile Clubs of New Jersey; R. A. Green, treasurer, New Jersey Automobile Trade Association, Newark; J. H. Edwards, Automobile Club of Hudson County, Jersey City; William H. Hunt, Automobile Club of Hudson County, Jersey City; Walter S. Schutz, counsel, Connecticut State Automobile Association, Hartford; F. T. Staples, vice-president, Connecticut State Automobile Association, Bridgeport; F. C. Donald, president, Chicago Motor Club, Chicago; Sidney S. Gorham, Chicago Automobile Club, Chicago; Robert B. Caverly, president, Automobile Club of Washington, D. C.; LeRoy Mark, secretary, Automobile Club of Washington, D. C.; Charles J. Forbes, Jr., secretary, Cleveland Automobile Club; Dr. A. B. Heyle, Cincinnati Automobile Club; Hon. F. H. Gillette, Automobile Club of Springfield, Mass.; L. R. Speare, Bay State Automobile Association and Massachusetts Automobile Club, Boston; Osborne I. Yellott, president, Automobile Club of Maryland, and Maryland State Automobile Association, Baltimore; John Bancroft, president, Delaware Automobile Association, Wilmington; F. E. Chapman, West Virginia State Automobile Association; George Ade, Indiana State Automobile Association; S. Royer Davis, secretary, Automobile Club of Philadelphia, and chairman of the Legislative Committee Pennsylvania Motor Federation.

Mr. Terry also appeared as general counsel for the National Association of Automobile Manufacturers. The Professional Chauffeurs' Club of America was also represented by President Sullivan and ex-President Walters, with Xenophon P. Huddy, Esq., its counsel. The latter discussed the bill briefly, urging chiefly that it be amended so as to permit the federal registration of chauffeurs while operating motor vehicles in states other than those of their residence.

The hearing was opened by President Hotchkiss, who briefly pointed out the necessity for interference on the part of the federal government to protect the motorists of the nation while operating in those states which require the registration of non-residents and use the requirement as a means to taxation

The principal argument was made by Charles Thaddeus Terry, Esq., chairman of the Legislative Board of the American Automobile Association and representative of the National Association of Automobile Manufacturers. Mr. Terry's presentation, both of the facts which make such legislation desirable and necessary, and of the constitutional argument in favor of the bill, was stated by Congressmen present to be one of the most brilliant ever heard by the committee.

It was practically conceded by the committee that legislation of the kind asked for was necessary, and that it should be accorded if Congress had power under the federal Constitution to regulate the registration of motor vehicles when operated in states other than those of their owners' residences. It was apparent at the outset that, the question being an entirely new one and the powers of Congress being necessarily limited to its control over commerce between the states as granted to it by the Constitution, and as construed by the commerce decisions of the Supreme Court, the problem to be solved was whether Congress could in any way regulate the use of a pleasure vehicle, when operated on the highways of a state other than the state of the owner's residence, in other words, when engaged in interstate travel. It was apparent, also, that most of the members of the committee had grave doubts as to such travel being within the meaning of the word "commerce" in the Constitution. Hence, when it is stated that after a two hours' presentation by Mr. Terry several members of the committee stated that while they had been very doubtful, they had been either wholly or almost convinced that Congress had the power to pass the Cocks bill, the

high merit of Mr. Terry's presentation will be appreciated.

In substance, his argument was that though the word "commerce" originally connoted an interchange of commodities from state to state, the supreme court had from decade to decade widened the meaning of the word until it now included not merely trade, but transportation, the interchange of telegraph messages, the carrying of lottery tickets on the person of a mere traveler, travel itself, in fact, intercourse between the states in the broadest possible sense of that word. It can be stated with some confidence, that as to this the committee seemed to agree with Mr. Terry. In other words, he demonstrated to the committee that Congress had power to legislate concerning the registration of the newest means of intercourse, or intercommunication, between the states.

Mr. Terry also called attention to a line of decisions by the Supreme Court, which held that under the commerce clause of the Constitution, the federal government had power to pass laws which would prevent one state from exacting license fees, tolls or taxes, either from vessels or from their pilots or masters, when plying navigable waters entirely within a state, other than the state where the vessel was enrolled: and called attention to the fact that there was in principle no difference between the natural highways of a state or nation, that is the waterways, and the dirt highways, and also that there was no difference in principle between a vessel navigating such natural highways, and a wheeled vehicle using such artificial highways. Asked by Congressman Malby of the committee, whether there was not a distinction between vessels engaged in interstate trade and purely pleasure vessels, Mr. Terry called attention to the case of the yacht "Yosemite," in which the Supreme Court held that there was no such distinction and that a vessel operated between ports of different states, and purely a pleasure yacht, was properly subject to a law preventing exactions by states other than that of its enrollment, and that this statute rested solely on the commerce clause of the Constitution.

While the chairman of the committee and several of its members repeatedly asked questions which indicated that they had grave doubts as to the constitutionality of the bill, Mr. Terry's argument made a deep impression and entirely convinced several of the committee. It is not likely that final action will be taken on the bill for some weeks, owing to other matters pressing on the attention of the judiciary committee, but, it is confidently expected by Mr. Terry and his associates, that such action will ultimately be favorable to the bill.

Interviews with members of Congress not on the judiciary committee, led to the conclusion that should the bill be favorably considered by such committee, the bill will pass without substantial amendment or opposition.



MUST GIVE TWO-THIRDS OF ROAD

Unusual Provision of Ohio's New Bill—Graded Fees and Other Features of the Measure.

Automobile legislation in Ohio has progressed during the present session as far as the passage in the Senate, on the 12th inst., of Senator Ward's bill which includes. a provision for speed limitations which cannot be changed by local ordinance or laws. This feature of the measure, which passed with only one vote against it, threatens its future even in the Senate, where it will have to be reconsidered because of errors made in amending it during its progress. Now, it is said, certain senators from the country will endeavor to amend it so as to take from the State the power of speed regulation and restore it to the counties, villages and cities. The limits specified by the bill as it stands are 8 miles an hour in business sections of municipalities; 15 miles in other sections of municipalities, and 20 miles in the country.

The bill requires the registration of all automobiles by the Secretary of State, the scale of fees being \$3 for cars up to 12 horsepower; \$5, up to 20 horsepower; \$10 up to 50 horsepower, and \$15 for higher powered machines. Dealers get special licenses for \$10 for each type of car. Owners must carry their certificates of registration with them, and the driver of a borrowed automobile must carry the written consent of the owner. Chauffeurs must register at a cost of \$2 for license. Non-resident owners must only comply with road rules and the regulations concerning equipment, if they are registered in their own states.

License numbers must be displayed front and rear on machines. Bills, horns and brakes are required, and lights displayed must illuminate the license number.

The road rules require that the motorist must slow down and stop when signaled so to do by the driver of a horse vehicle. Also he must give two-thirds of the road to persons with horse vehicles whom he meets.

Motorists arrested are to have right of immediate hearing or of giving bail not to exceed the maximum fine for the offense charged. The Secretary of State is to register cases of arrest and conviction and notify all county clerks of the same.

Penalties are provided as follows: Fines of \$25, \$50 and \$100 and 30-day sentences are provided for first, second and third violations of registration, speed, equipment and road rules sections of law. Using fictitious license number or one belonging to another draws fines of \$25, \$50 and \$100 with 60-day sentences, according to the offense. Failure of chauffeurs to register draws fines of \$50 and \$100 and suspension of right to be registered for two years. Failure to show written consent from owner for use

of machine draws penalty of \$200 fine and six months' sentence. Revenues from this source are to be used for maintenance and repair of roads.

Anti-Tire Chain Sentiment Spreads.

Anti-tire chain sentiment has penetrated to the senate chamber at Trenton, N. J., and has resulted in the introduction of a bill by Senator Leavitt. It would amend the motor vehicle act by providing that no motor vehicle shall have chains on its tires when using gravel or macadam roads.

The Fairmount Park Commission of Philadelphia also has carried out its intention of prohibiting the use of chains on the tires of automobiles when using roads in the park. The commissioners heard automobilists on the matter several weeks ago, as reported in the Motor World, and in their rule, adopted on the 12th inst, they exempt Belmont avenue. As further indicating an intention to treat automobilists fairly they agreed to ask councils for money necessary to asphalt the north side of Girard avenue, between the bridge and Parkside avenue. This improvement is contemplated with the idea that it would be a convenience to automobilists bound for points on the main line who now use park drives.

Arkansas Automobilists Organize.

With promise of becoming a lively factor in the motoring world, the Automobile Club of Little Rock (Ark.) has organized in that city, to affiliate with the A. A. A. The officers chosen were: President, Moorehead Wright; first vice-president, J. P. Runyan; second vice-president, J. N. Heiskell; secretary, Irving S. Hirsch; treasurer, Perry Stifft. The officers named, with E. P. Ladd, C. A. Pratt, J. E. Osborne, W. B. Miller, and J. A. Van Etten, will compose the board of directors. Capt. C. A. Pratt was named as director to represent the Arkansas association on the A. A. A. board.

Kentuckians Incorporate State Association.

The Kentucky State Automobile Association, comprising the Louisville, Legington and Owensboro clubs, has been organized and incorporated with the following officers: President, Ira S. Barnett, of Louisville; vice-president, F. R. Toewater, of Lexington; secretary and treasurer, Walter Kohn, of Louisville; directors, Louisville club, Ira S. Barnett, Dr. Lindsay Ireland, Walter Kohn; Gluegrass Club, of Lexington, F. R. Toewater, E. H. Alexander; Owensboro Club, J. T. Dawson, Allen Reid. The club will affiliate with the A. A. A.

Planning for Road Around Two "Knobs."

Jacobs Ladder and Morey's Hill, the two famous and neighboring "rises" near Lee in the Berkshire Hills, on the route between Lenox and Springfield, Mass., may lose their terrors for tourists. Efforts are being made in Boston and elsewhere to raise a fund of \$15,000 for the purpose of building a road around the two "knobs."

PREPARING FOR THE GLIDDEN TOUR

New Rules Will Not Permit a Tie to Remain Unbroken—Allowances Likely for Tire Troubles.

One feature of the revised rules for the 1908 A. A. A. tour and contest for the Glidden trophy that is certain to cause general commendation, is a provision that cuts the string the Buffalo Automobile Club has had attached to the Glidden trophy ever since it first was offered for competition. It is understood that the new rules will provide for a run-off in case of a tie between any two clubs. Under the old rules the trophy had to be distinctly won from the holding club by some other organization, and in 1906, when the Buffalo club was in a tie with some others, the Buffalo club retained the trophy. This year if the Buffalo club finishes in a tie with another one or two, it will have to fight it out with them on the road.

The rules have not yet been officially given out, but enough of their probable character is known to permit of discussion. The plan for awarding the trophy this year will be an improvement on that of last year. The desirability of a club being able to enter a team composed of one make of cars has been considered and one club will be allowed to spilt up nine cars into three teams of three cars each, or six cars into two teams. The trophy will be awarded on the basis of club teams, probably to the club having the most teams with clean scores, or in event of no clean scores, to the club standing best in the penalization table. The penalization system will be the same as last vear.

Another interesting provision that probably will be made is one concerning deducting the time lost because of tire trouble. Many manufacturers object to having to make up the time lost in the repairs, because tire troubles are a gamble, pure and simple; but it was pointed out that if the rules provided for allowing the time spent fixing tire some would deliberately puncture a tire and repair it, in order to take time to let the engine cool, should it become overheated. It is likely that this objection will be met by a rule that time spent in tire work will be allowed, provided the engine is kept running.

Another interesting point about this year's tour is that all possibility of discussion among the committee in charge has been done away with and there will be one executive head to it, F. B. Hower, who was the actual manager last year, although a committee was nominally in charge. This definitely will fix all responsibility while the tour is in the field. It is supposed that Mr. Hower has learned to enforce rules and routes as they are laid down and not merely when and how he thinks they should be enforced.

FACTORS AFFECTING TIRE LIFE

Scientific Reasons for the Rapid Wear of Back Tires—Typical Cause Explained and Others Specified.

Many motorists have had occasion to wonder why their back tires wore out so much more rapidly than the front ones. Generally speaking, the all-inclusive answer to this question has been that the traction to which the drivers are subjected is sufficient to account for the difference. In a paper recently presented before the Royal Automobile Club of Great Britain, however, Mervyn O'Gorman, the well known scientist and pioneer motorist shows that a number of other factors also ought to be taken into account as having a very important bearing on the matter.

"Many parts of a car seem to have nothing to do with tires until one dwells upon their elementary functions," he remarks.

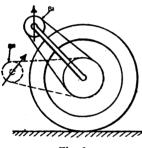


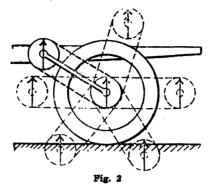
Fig. 1

"For example, nothing seems more inert in this connection than a distance rod. Considered as the piece through which the car is pushed forwards, it is known to be in compression and accordingly stiff. As being the piece which is connected both to the frame and the axle it must be hinged at the fixing, and as the sides of the car often rise and fall unequally on the springs, the distance rod must also be pivoted for side movement at the hinge. . . .

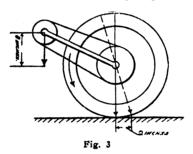
"With a chain driven car the distance rod is often supposed to prevent the taut side of the chain from varying in tightness when the car body moves up and down on its springs. If it fails in this the drive to the road wheels will be irregular and the tire will rub. Looking into detail shows us that it does fail, and the question to be answered is simply this: Is the tire rubbing due to this cause negligible? To study this we will first suppose the car at rest, the back road wheels prevented from turning, and a very heavy weight put on to the chassis over one of the back springs. This lowers the chassis, and with it the front sprocket (Fig. 1), from the position S' to S", which we may suppose to be the extreme movement when the car "bumps." say, 8 to 10 inches.

"The distance rod prevents S' from leaving a circular path round the back sprocket. The upper chain is carried round with it,

and is obviously wound on to the back sprocket. At the same time a certain amount of chain is, for a similar reason, wound off the moving one. If the sprockets were of equal size, the amount wound off would equal the amount wound on to the

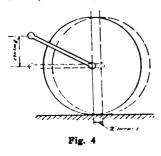


other, and neither would turn on its axis, as shown in Fig. 2. But normally the front sprocket is the smaller, and accordingly it has to rotate as shown in Fig. 1. It is very important to appreciate the amount of this rotation and its direction. If a small sprocket moves once round another having a larger circumference, a length of chain equal to that larger circumference will be wound onto the larger sprocket. If,



then, the smaller sprocket is one-third smaller, as is common, it will have to rotate through one-half of a revolution, and proportionately for fractions of a revolution. The direction of its rotation will, as shown by the sloping arrow in Fig. 1, be clock-wise for a downward movement to the dotted position. It will be noted that this tends to turn the engine backwards, after taking up all the back loss or play in all the gears engaged, including the chain.

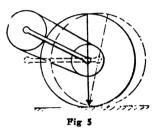
"In practice, when the car is not station-



ary, the converse is usually the case—namely, the front sprocket, S, is prevented from backward rotation by the engine or the foot brake—and the back wheel must unless the chain snaps, rotate forwards

(the backlash having already been taken up by the engine pull). Every time the tire rides over a lump this occurs in some degree, and when, as sometimes happens, the car body oscillates vertically over the full range of clearance of the springs, the movement is greatly exagerated.

"It is easy enough to calculate the amount of movement, but it is more convincing to illustrate this forward rotation by a model made to half scale of a chain drive and road wheel. The front sprocket of the model is locked, and the road wheel free to turn. Taking a vertical downward movement of the springs of 8 inches, and the usual dimensions of wheel and sprocket given in Fig. 3, the wheel turns through such an angle that the tire slips forward 2 inches. Simultaneously the radius rod, in moving from a sloping to a more horizontal position, pushes the axis of the wheel through an additional space of 2 inches. as shown in Fig 4. It is now necessary to see how long an interval of time this movement takes. If the time is very short, the inertia of the car and engine respectively



will prevent their moving forward, and the wheel will consequently have to skid. . . .

"A simple calculation shows that a bad road hollow 2 feet wide traversed at 40 miles per hour is passed in less than 1-29 second. Whether or not the wheel follows the profile of the ground on the first part of the down slope, it will be found in most cases that by the time it has struck the far side of the puddle and rebounds from it the car body will have started its downward movement. We have, therefore, the wheel moving up and the car body moving down with considerable velocity. As far as I could judge when noting this, the car had not moved three feet beyond the hollow before the bump occurred. At this speed three feet represents 1-20 second, and during this short time the car would either have to be thrust forward 4 inches, or the road wheels must skid round that amount.

"To determine which must occur is quite easy, thus: To thrust a 3,000 pound car forward 4 inches in 1-20 second, is to give it an added velocity of 80 inches per second, or 6.28 feet per second, or 4.4 miles per hour, and this would be done in 1-20 second. Such a push, if continued for a whole second, would give a car a velocity of 88 miles per hour (in one second), and would require a pull of 12,000 pounds. This pull is seven or eight times the adhesion between the ground and the back wheels, so that we may safely say that the wheel skids, both

at this speed and at speeds of one-half and one-third of this amount. The amount of the skid is 11 per cent., which represents work done in wearing and heating the road, raising dust and heating the tire. The power to effect this work is derived from the engine, and is a loss. If we suppose that on the average this loss amounts to only 5 per cent., because the average travel of the springs may be taken at 4 inches, we still find quite an important diminution of speed when the car is running all out. A remedy has occurred to me for this trouble in chain cars. I have two different sprockets from those we have been considering, both for the back and front. Contrary to normal practice, the small one is on the road wheel, and the large one in front. I will recall that we had 2 inches of skid due to the sprockets and 2 inches more due to the radius rod, and all I propose to do is to work these two skids in opposite directions, and as nearly as possible simultaneously. This I show in Fig. 5, where at the end of the downward movement of the sprocket the two movements have, within a certain margin of error, cancelled out. In this particular case the sprockets are of the same diameters as were used before, their positions only have been exchanged."

Speaking of cars driven by propeller shafts, the author refers to one which "has the curious property that, if fitted with a fine ratchet sprag, it can be caused to travel forward by the persons in the tonneau simply jumping up and down so as to work the springs, and illustrates the effect that a road shock has in causing the road wheels to turn forward, or, failing this, to skid.

"From the point of view of the heavy unsprung weight on the back axle, the propeller shaft car should be substantially harder on tires than the chain driven vehicle, and in some cases it is so. In other methods of construction such care has been taken of what I have called the 'radius-rod effect,' that in spite of the above indicated disabilities they are actually less wearing to tires. In the propeller type car the following provisions must be made: (a) A universal joint to allow the transmission to be flexible. (b) A push rod (corresponding to the radius rod of chain cars) to push the car along. (c) A torque rod, sometimes the springs, sometimes the propeller shaft itself, arranged to take the reaction of the drive; that is to say, a piece which tends to lift the front of the car when the engine exerts its power. Each of these provisions has problems incidental to it, which bear on the wear of tires. . . . Both causes of wear mentioned in connection with chain driven chassis are found here in some degree: (1) The axle is forced backwards, because the horizontal projection of the push rod is increased. (2) The wheel is caused to rotate through an angle swept out by the push rod, and these two troubles are additive.

"Lastly, in those numerous cases when the push is taken through the springs the flattening of the spring gives a further movement backwards to the axle, and this movement is again additive.

"In the best type of live axle cars employing two universal joints, a slide, and a parallelogram of radius rods, the effect we have been considering is reduced in practice to less than one inch of tire movement for 8 inches of spring movement. All that is now wanted is that a demand should arise for cars which are easy on tires, as against cars which are simply cheap in capital cost."

By way of conclusion he adds a few other causes of wear in the rear tires of the car, not enumerated above, nor belonging in the same category, which are as follows:

"(1) Engine driving effort: (a) Even if the turning moment is uniform. (b) Ununiform turning moment exaggerates this wear somewhat, but the un-uniformity of the ordinary engine of four or more cylinders is smothered under the other un-uniformities introduced elsewhere.

"(2) Clutch: (a) If fierce or let in roughly. (b) If fierce, especially when reversing, as the torque takes load off the driving wheels.

"(3) Radius rod effect: (a) With chains I believe this to be practically curable by adopting my relationship between sprockets and radius rod. (b) With propeller curable by two universals, one slide, and a proper parallelogram of distance rods.

"(4) Transmission: Part of the transmission often introduces an un-uniform conversion of speed—e. g., one universal joint (so does a chain, both in a small degree usually)

"(5) Weight causes bending of side walls, and therefore fatigue of tire. The drive of the engine transfers weight, say 100 pounds, to the back wheels, and adds to this effect. Unsprung weight on back axle causes heavy blows on the ground, the momentum of which adds further to this effect.

(6) Brakes cause skid and wear. The effect of applying the brake is unfortunately to take weight off back wheels. Unbalanced brakes: Loss of adhesion by applying brakes to only two wheels, thus doubling the wear on them.

(7) The differential, owing to its unfortunate property of turning the wheel with least adhesion."

Importance of Cylinder Temperature.

Cylinder temperature as a vital consideration to the efficient running of a gas engine, is seldom taken into account by the average motorist, at least to the degree that should be done. So long as the motor does not become hot enough to cause pre-ignition or cold enough to lose power, no further thought is given the matter. As a matter of fact, even comparatively small changes in the temperature of the jacket water may have considerable influence on both the power output and the fuel consumption, as is shown by the results of tests recently performed on a Napier engine for the purpose of proving just this point. The maximum power output and minimum fuel

consumption were developed with a jacket temperature of 149 degrees, Fahrenheit.

When the cooling water had been reduced to 115 degrees, the power fell away 3.64 per cent., while the consumption increased 4.8 per cent.; while with the water reduced to 56 degrees, the power dropped to 6.6 per cent, less than its maximum value. and the consumption rose to 11.5 per cent. above its minimum. Raising the temperature of the cooling water, instead of increasing the power and reducing the consumption, as might have been expected, produced just the reverse effect. At 185 degrees, the power had fallen away .66 per cent. of its original value, and the consumption had risen 1.38 per cent., while at 212 degrees, the power was still 1 per cent. less, and the consumption .55 per cent. greater. Temperature was the only available factor in this instance, as both load and speed were held constant. The values manifestly apply only to the motor in question, but the principle involved is an important one.

Automatic Chamferer for Gear Teeth.

It is only a short time, comparatively speaking, since even the advisability of chamfering the ends of gear teeth in automobile transmissions was considered open to discussion. Since the practice has become generally accepted, the method of developing this all essential little finishing touch has been left largely to that ancient retarder of mechanical processes-hand labor-or to such special devices as the ingenuity of the shop foreman might contrive. The result has been more or less unsatisfactory, ordinarily, and expensive as well, A thoroughly modern and expeditious attachment for performing this work rapidly and accurately and to any desired profile. has now been developed by the "Long Arm" System Co., Cleveland, O. It may be clamped to the table of a small milling machine and is absolutely automatic. It will handle gears of from 2 to 91/2 inch pitch, and of 4 to 10 diametral pitch, and when run at proper speeds, will chamfer about 12 teeth per minute. The attachment is fully described and illustrated in the "Long Arm" Co.'s Bulletin 25.

Driving Attachment for Buggy Wheels.

It would appear to be rather a difficult matter to attach a driving sprocket and brake drum to a common buggy wheel in such a way that it would be secure and durable, and it would prove quite as difficult a task as it appears unless just the right method were followed. The Cullman Wheel Co., Chicago. Ill., has developed a new method for effecting this attachment which is so important to the successful development of the modern high wheeled motor buggy, and a particularly simple one, too. Their counter shaft sprockets and differential gears which are designed for the same use are also an innovation in a very extensive line of sprocket and differential gearing.

TESTS OF TRUCK PERFORMANCE

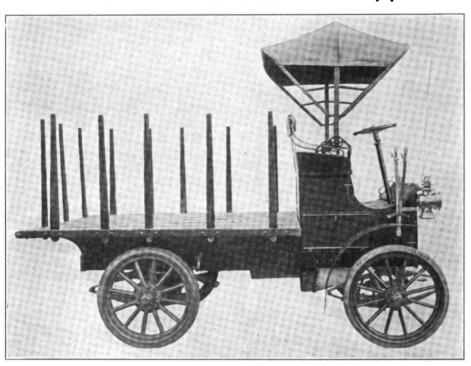
Results of Six Months' Practical and Experimental Service—Cost of Operation
Under Various Conditions.

With the commercial vehicle, unlike the pleasure car, the crucial point is performance, in contradistinction to mere power, weight, speed, wheel base, or appearance. From this standpoint, the construction of the Franklin "2,000-pound" truck, which, despite its name, has a rated capacity of 3,000 pounds, must be considered highly creditable as developed from the results of data gathered in the course of six months' use

wage item, this factor amounts to just about 83 cents. Whence the cost of operating the vehicle is worked down to 23/4 cents per ton mile.

As to hill-climbing performance, which, next to load carrying capacity and cost, is the most important item in the commercial vehicle catalogue, one of these machines, carrying a 3,000 pound load was driven up the hill leading out of the main gate of the factory, which is a 14½ per cent. grade, the Geddes street grade, which is of 11 per cent. pitch, and the Irving avenue grade of 12½ per cent. The James street hill, which is a grade of from 7 to 8 per cent., also was covered, and on second speed.

By way of an economy test, the same vehicle was run over city pavements for a



FRANKLIN TRUCK USED IN TESTS OF PERFORMANCE

of three of these little vehicles in and about the Syracuse (N. Y.) factory of the H. H. Franklin Mfg. Co. In this connection, it is to be observed that the running costs are higher than would otherwise be the case under similar road and mileage conditions, because the vehicles were used for experimental purposes frequently, which would tend to raise the cost of maintenance above its normal amount.

Lumping the performance of the three vehicles and averaging the result, the performance per vehicle worked out at an average of 10 trips per day, over 40 miles of road, with a load of 1.500 pounds, making a ton mile average of 30 per day. For this, the fuel consumption works out at 3.4 gallons, and the oil consumption at .22 gallons. Counting the driver's wages at the rate of \$1.87 per day, the average cost of haulage per day amounts to only \$2.70. This includes besides the driver's wages, the cost of fuel and oil, and the cost of time spent in repairing the machine. Exclusive of the

distance of 143/4 miles, encountering only one hill, and developing a consumption of 1.12 gallons of fuel, which represents an average of 19.7 ton-miles per gallon. Oil costs worked out at 66 ton-miles per quart. The average speed during the trial was 10.4 miles per hour. With a load of 4,000 pounds, the hill leading out of the main gate of the factory was again climbed successfully, as well as the entire length of the Geddes street hill. By way of an economy test, 91/8 miles of city pavement were covered with the same load, at the rate of 10 miles an hour and with a fuel consumption of 25% quarts, which is an average of 27.8 ton-miles per gallon. The oil consumption for this trip was only ½ pint, or at the rate of 73 ton-miles per quart consumed.

The 1908 Model J truck, with which these performances were made, is the light and compact little machine shown in the accompanying pieture. It is driven by the 16 horsepower four-cylinder, air-cooled motor, equipped with the famous concentric valves

which are a 1908 innovation in the Franklin line. Another feature which largely aids in its meritorious performance is the worm drive, which gives an unusually smooth transmission of power, with an astonishingly low friction loss. The wheels are 32 inches in diameter, shod with 2½-inch solid tires in front and 3-inch in the rear; the wheel base is 76 inches, and with the stake body shown, the platform area available is 60 by 72 inches.

Electrical Lubricator Telltale.

Safe to say the motorist does not live who at one time or another, has not been annoyed by the stoppage of the lubricating system of his car, and who would not welcome an infallible indication that the oil either is, or is not, flowing as it should. That the usual sight-feed glasses are weak in being useful only when there is sufficient light to observe them, is well known, but it required British ingenuity to devise the "Orleans" lubricator tell-tale, which has recently been placed on the market. Briefly, it consists of a small cylinder containing a piston, normally held at the lower end by iona spring, and serving as a regular connection between the lubricator and the bearings which it is intended to feed. In flowing through it, the pressure of the oil must raise the piston against the tension of its spring sufficiently for it to uncover a port in the cylinder wall: So long as the oil is flowing, the piston is kept part way up in the cylinder. As soon as the flow ceases, however, the piston descends to the bottom of the cylinder, while simultaneously contact is made between a finger carried by the piston rod and an insulated ring in the top of the device, whereby an electric circuit is closed and an alarm bell is rung, notifying the driver that something is wrong with the lubricator.

Big Mileage in Business Trips.

The family baking of many households in the eastern part of Long Island has been facilitated, it would appear, by what Michael Bruckner, of Riverhead, regards as the wonderful record of the Maxwell car with which his distribution of yeast is made. Bruckner has made his trips regularly during the past eight months in all sorts of weather, and over every variety of good, bad and indifferent roads. covering a total distance of more than 15,000 miles. He claims to have expended less than \$100 for repairs.

Economy of Horseless Fire Apparatus.

According to the fire commission of Springfield, Mass., the four automobile fire fighters in the department there, locally known as the "flying squadron," saves the city \$189.20 per year, as compared with the cost of horse equipment. The "commissioner therefore recommends the purchase of three combination chemical and hose automobiles to replace horse drawn apparatus, and expects to purchase additional chemical machines during the coming year.



HERDING CATTLE WITH MOTOR CARS

How Texas Cowboys Use Modern Methods in Their Business—Some of the Advantages that Result.

Having adopted the motor car for use in the ambulance service, police patrol, package delivery and nearly all other forms of transportation for people and inanimate objects it would seem that the field of usefulness for the gas engine was pretty well covered. But another industry has found that the motor vehicle is practical and advantageous and not a few automobiles are now used as a substitute for the cow pony for herding cattle.

THE MOTOR WORLD

come afforded by their farms. A recent victim has turned upon them, however, and a farmer named Hofmaier, who lives in the vicinity of Bamberg, is on trial this week for blackmailing no less a personage than Duke Francis Joseph of Bavaria.

The duke recently was driving an automobile in that neighborhood and the allegation against Hofmaier is that, seeing the duke's automobile approaching, he detached his horses from a farm wagon and purposely inflicted a serious wound upon the animal. When the duke came up, Hofmaier accused him of having run into his wagon and caused the injury to the horse. A crowd of about 100 peasants collected around the motor car, and refused to let the duke depart until he had paid over to Hofmaier all the money he had and promised to forward



COWBOYS AND THEIR MODERN EQUIPMENT

In the little town of Midland, in the heart of the cattle country of Texas, the men interested in the cattle industry are using motor cars in preference to horses. The collection of Mitchell automobiles shown in the illustration with the exception of three cars that belong respectively to a doctor, a banker and the sheriff, are the property of the cowboys and cattlemen.

In Texas a small ranch consists of about 2.000 acres, the others run up as high as several hundred thousand acres. These immense tracts of land are usually some distance from the towns and cities; the use of motor cars therefore is quite natural as the ordinary means of transportation between the ranches and the towns. But to use the power driven vehicle, in preference to the cow pony, when driving cattle, opens up an avenue of usefulness that was inconceivable a very few years ago. When gauntlets and goggles supplant spurs and a rawhide, another of America's picturesque institutions will have yielded to the onward march of commercialism and progress.

How Bavarians Blackmail Motorists.

Blackmailing automobilists is said to be one of the most popular among schemes whereby bucolic Bavarians eke out the inthe farmer \$40 beside. The duke related the incident to the prince regent of Bavaria, who advised him to bring suit against Hofmaier, as there was reason to believe this method of blackmailing was spreading.

Boston Restricts Official Motoring.

Though no accusation of "joy riding" has been made against Boston's fire chief, he has been ordered by the Fire Commissioner to use the automobile, furnished by the department, only for fires in the suburbs and "special occasions." The fire commissioner states that, while he personally is in favor of extending the use of automobiles in the department rather than curtailing their service, he must practice economy, hence the order. The department owns four automobiles, two used by the fire fighters, one by the commissioner and the other by the superintendent of repairs.

Mattoon Club's Annual Election.

At the annual meeting of the Automobile Club of Mattoon (III.) the following officers were elected: President, H. W. Clark; vice-president, F. E. Thatcher; secretary, George X. Chuse; treasurer, Dr. W. C. Lumpkin; directors, J. F. Chuse, Bert B. Cole, and E. B. Tucker.

MOTOR CARS IN ANTELOPE HUNTING

Montana Man Shows How It Can be Done

—The Fleet Animals Overtaken in

Long Chase.

"Look not mournfully into the past, it comes not again." The day has gone when "the speed of the antelope" will serve as an illustration of the greatest rapidity obtainable.

M. L. Wordman, a prominent citizen of Lewistown, Mont., an automobilist and a sportsman, recently conceived the idea of hunting the fleet antelope and using his National automobile in the chase. In company with a chauffeur he left his home town at about 8 o'clock one morning and started for a spring 65 miles away, where he thought the speedy animals would be found. Two hours later he arrived at his destination and after driving around for a few minutes he saw, with the aid of a powerful spy glass. a herd of about 25 antelope, lying down, five miles away.

The machine was headed toward the herd and as the country was almost level and the grass had been closely cropped by thousands of head of sheep he could easily distinguish all holes and stones at some distance away, and thus could safely drive at a high rate of speed. The car and its passengers were within a mile of the antelope when it was seen that they were becoming restless. Speed was diminished and another quarter of a mile was traveled when the group of fleet-footed animals took fright and bounded away with a speed that would have disheartened an ordinary hunter.

With slightly increased speed the automobile followed for a short distance, then the throttle was opened wide and the chase begun in earnest. Away went the pursued but far faster went the pursuers, and in two miles the gap between them was only 50 feet. Woodman raised his gun and fired, and although the car was going 35 miles an hour, an antelope dropped. The car was stopped long enough for him to take the wheel, then the chase was resumed. In a few minutes they had again caught up with their prey and the chauffeur took a shot. Another animal dropped, and as that was all that the Montana game laws allowed. the hunt was over.

When the dead antelope had been dressed they were loaded on the car. The homeward journey was completed by 4 o'clock in the afternoon, about 150 miles in all having been covered. Woodman says that this was the first hunt for big game in an automobile, and he adds. "but it is my intention to repeat it next year, having fully convinced myself that my National car can easily outrun an antelope, the fleetest animal to be found on the plains of the great West."

AUTOMOBILE AS SURGICAL AID

How It Made Possible a Major Operation and Saved a Life—Surgeon's Report of the Case.

Actual participation in a surgical operation, with the credit of assisting in the preservation of a human life is the most recent achievement credited to the automobile. W. B. Reid, M. D., of Rome, N. Y., tells the story in his report on a case of appendicitis furnished to the American Journal of Surgery.

Dr. Reid was summoned by telephone to consult with the family physician of Mr B., a farmer, and to operate, if necessary, in a case of suspected appendicitis. A run of fifteen miles in his automobile brought him to the patient's farm house about 6 o'clock in the evening. The professional history of the case up to that hour showed a rapid and alarming progress of a sudden attack of "cramps" in the stomach. Dr. Reid's diagnosis revealed what he describes as "acute appendicitis with perforation" and his advice in favor of an immediate operation was accepted. The kitchen was chosen as the operating room and the family "ironing board" was made to serve as an operating table.

"All of the country farm houses and many city homes have no other lights than oil lamps," Dr. Reid states in the beginning of his report, and he expresses his hope that the report may contain a suggestion helpful to anyone situated as he was, with a patient needing a major surgical operation, for which such light was inadequate, and whose condition would not permit of removal to suitable hospital surroundings. And here is where the automobile performed its part. It provided the necessary light. Dr. Reid says:

"The automobile was driven as close as practical to the kitchen window, the large searchlight lamp detached from the machine and passed into the kitchen. Rubber tubing ordinarily used for drainage was spliced by a glass drainage tube and used to connect the gas tank on the side of the automobile with the lamp in the kitchen surgery. The gas was then turned on, lighted, and the illumination found to be ideal. In fact, the light was just as good as in any well-appointed operating room."

After describing the operation, which was successfully performed, the patient eventually recovering, Dr. Reid concludes his report as follows:

"The pathological condition of the appendix, demonstrated at operation, suggests the probable outcome of the disease had we been obliged to have wasted time in his removal to a hospital. Next to the danger of time loss, we cannot but be impressed with the great danger in the mechanical disturbance of the parts in moving a pa-

tient in such a condition over rough country roads, which of necessity would tend not only to mechanically scatter the infection caused by the perforation, but by starting a peristalsis of the stomach and intestines, thereby also scatter the infection to such a degree as to cause general peritonitis.

"Next to the early diagnosis of the family physician and his prompt action, I feel that the automobile with its gas tank and lamp, was a strong factor in the means of saving the man's life."

Making a Mudhole Profitable.

Getting wealth out of holes in the ground is not confined to mining regions, for there are several reports of the somewhat rich yield certain New Jersey farmers are deriving from a mudhole on the Red Bank road a short distance this side of the intersecting road which leads to Matawan. Marshtown is the appropriate name of the little place nearest to the intersection, and conveniently located adjacent to the mudhole in question is a farm house. Several touring parties who made short trips through New Jersey on Sunday last returned to New York City with hard luck stories of muddy roads, and some of these parties had something to tell of this particular hole

It was noticed by the tourists that when their machines settled into the hole there came no offer of assistance from the farmer and several of his friends who complacently stood at the fence watching the vain efforts to get out of the difficulty. When asked to bring his team and help the travelers the farmer demanded \$5 for the work, which took but two minutes. This had to be paid, as the motorists were helpless and no other assistance was available for getting the car out of the mire.

There were four automobiles stalled at this place at noon Sunday, and it is said that a few days before four machines each paid \$8 for a few minutes' use of the team. There is some suspicion that the road at this place is kept in bad condition as a trap for automobiles.

Jerusalem Sees Its First Automobile.

Of the many wonders that the ancient city of Jerusalem has witnessed, the latest, and to the present denizens of that city the most wonderful, was presented in the advent of the first motor car ever seen there. Of course it was driven by that indefatigable collector of touring records and experiences—Charles J. Glidden, of Lowell, Mass. Accompanied by Mrs. Glidden, he reached Perusalem rfom Haifa, Syria, on Friday, 13th inst. The sight of the great modern vehicle created a sensation among the residents

"The A B C of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

ARMED AUTOMOBILE IN REAL WAR

Practically Tested in French Rumpus in Morocco—Stood Strenuous Marches and Was an Effective Fighter.

What service the automobile might be able to render in war has been illustrated in a variety of ways in connection with military manoeuvers in our own country and abroad. What it can actually do under the stress of real war has been shown by a car engaged in the French rumpus in Morocco. This machine, says a foreign newspaper, is a Panhard, fitted with three quick-firing guns. It left Paris on December 9, last. Six days later it had progressed so far as to arrive at the scene of, and take part in, the most decisive engagement of the campaign—that at Ain Sfa, where its usefulness was such that its commander, Captain Genty (a well known French amateur racing motorist, by the way), has since been decorated with the Cross of the Legion of Honor, "for distinguished service in the Moroccan campaign."

This particular chassis was of standard type, 40 horsepower, with only normal clearance. Its facility of manoeuvering, therefore, must set at rest forever the pessimistic tongues so often protesting that "cars were all right on roads, but for use in the veldt or desert, or indeed on any broken ground, were quite impossible." The journey to the front of this mitrailleuse was sufficiently beset with trouble to form quite a test case. From a few hours after it left the ship nothing at all like a road could be used. Rivers had always to be forded, their banks in many cases having to be followed for miles before this was possible.

The land within a considerable distance of any African stream from the Nile downward is always of the most irregular character, and when once a stream was crossed the ground on the newly reached side would be found to bear miles of bowlders, sprinkled anyhow, so irregularly as to make mile-an-hour walking, or large stretches of cactus, whose "spines" were so assertive as to force even the wild animals to give such places a wide berth. Then would be met nine little 1-in-4 climbs, succeeded by stretches of feet-deep mud. Out of the quagmire a sandstorm would be encountered and the car so absolutely snowed up that she had to be dug out of the grit. The next incident, probably, would be the sinking of the car up to the clutch shaft in a desert bog. On the whole, it may be said with confidence that the ground covered could not have been more difficult to traverse, and the fact that the first of France's automobile machine guns was able to get up to and account for a number of the mobile Arabs has proved beyond all cavil its claim to recognition as a practicable unit of effective fighting strength.

FIFTY MILLIONS ASKED FOR ROADS

National Grange Gets Important Bill Before Congress—Plan for Highway Improvements in Every State.

Firty millions of dollars for the construction and maintenance of a national system of roads is the amount of assistance the farmers have asked of Congress, not for the benefit of any specified sections, nor in the interest of any special class, but for every section and for every class. Other efforts have been made in the past to secure the creation of some national commission under which the highway systems of the various States might be made productive of better results than thus far have been obtained, but they failed to command the support of the farmers, the largest class to whom the problem of good roads should appeal; and lacking this the bills introduced in Congress were suffered to die, in some cases because they were so worded as to give the impression that they were in behalf of some favored few.

Now, however, the farmers have taken the initiative, and the immense project for improved highways involved in a bill just introduced in Congress, has been formulated through careful discussion in the National Grange, the representative organization of the farmers, which, with more than a million members, is a power that may be relied upon to sway congressional opinion in a large degree. Especially is this the case in view of the fact that the farmer element has, in dealing with the matter, put itself in touch with all other interests to which the problem appeals, and through the active propagandism of such men as N. J. Batchelder, a former Governor of New Hampshire, has practically enlisted the sympathy and assured the co-operation of many other organizations throughout the country, representative of every class of people making use of. the roads. The bill which the National Grange has succeeded in placing before Congress will, if passed, inaugurate at an early date a broad and comprehensive policy of road improvement that will affect every portion of the United States. The full text of the bill is as follows:

A bill to provide for the creation of a National Highway Commission, and for the construction, improvement, and maintenance of public highways.

ance of public highways.

Section 1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That this Act shall include within its provisions any and all public highways within the territory of the United States which, in the judgment of the Commission hereinafter created and constituted, might be constructed, improved, or maintained to promote interstate commerce and trade and the postal service of the United States.

Sec. 2. That a Commission is hereby

Sec. 2. That a Commission is hereby created to be called the "National Highway Commission," to consist of three Commissioners. The President of the Unted States

shall, by and with the advice and consent of the Senate, appoint three Commissioners, who shall have a practical knowledge of road building and construction. Any vacancy which may occur in the Commission shall in like manner be filled by the President; and he shall designate one of the Commissioners to be president of the Commission. Each of the Commissioners appointed shall receive as pay and compensation for his services five thousand dollars per annum. The Commissioners shall remain in office subject to removal by the President for inefficiency, neglect of duty, or malfeasance in office.

Sec. 3. That it shall be the duty of said Commission to take into consideration, formulate, and adopt such plan or plans for the improvement, construction, and maintenance of such public highways, the improvement, construction, and maintenance of which shall, in the judgment of the Commission, acting in co-operation and consultation as far as possible with the duly constituted authorities having charge of the construction and improvement of the public highways of the several States, promote and facilitate interstate commerce and trade and the postal service. The said Commission may, prior to the completion of all plans and surveys contemplated by this Act, proceed to such immediate work as in the judgment of said Commission may constitute a part of the general system of works herein contemplated.

Sec. 4. That it shall be the duty of said Commission to superintend and direct such works as are herein contemplated, and to carry into full execution such plan or plans for the construction, maintenance, and improvement of public highways as may be devised and adopted by the Commission as herein contemplated, and to make such additional surveys and investigations and mature such additional plan or plans and to carry the same into full execution as may be deemed necessary to construct, improve, and maintain a system of public highways, advantageous for the purposes of interstate commerce and trade and the postal service, and to accomplish the object of this Act.

Sec. 5. That the Commission herein constituted and appointed may cause proceedings to be instituted in the name of the United States in any court having jurisdiction of such proceedings for the acquirement by condemnation of any land, right of way, or material needed to enable it to maintain, operate, and prosecute works for the construction, maintenance, and improvement of public highways, for which provision has been made herein, and to construct. improve, and maintain such public high-ways. Such proceedings to be prosecuted in accordance with the laws relating to suits for the condemnation of property for a public purpose of the States wherein the pro-ceedings may be instituted: Provided, however, That when the owner of such land, right of way, or material shall fix a price for the same, which in the opinion of the Commission shall be reasonable, the said Commission may purchase the same without further delay; And provided further, That the said Commission is hereby authorized to accept donations of land, rights of way or material required for the rights of way, or material required for the maintenance and prosecution of such work.

Sec. 6. That there is hereby appropriated, out of any moneys in the Treasury of the United States not otherwise appropriated, for the purpose of carrying out the provisions and objects of this Act the sum of fifty million dollars. The sum of not less than five hundred thousand dollars out of such appropriation shall be expended in each State of the United States, said sum of five hundred thousand dollars to be expended in each State at the rate of not less

than one hundred thousand dollars a year. The said appropriation of fifty million dollars to be available at the rate of ten million dollars a year during the years nineteen hundred and eight, nineteen hundred and nine, nineteen hundred and ten. nineteen hundred and eleven, and nineteen hundred and twelve. If any of the appropriation herein made is not expended in the year named that portion not expended shall become available in the succeeding year or until expended.

Sec. 7. That the Commission herein created and constituted shall superintend, control, and expend for the purpose of this act all appropriations herein made, or which hereafter may be made for said purposes, or so much thereof as shall be necessary, and shall prepare and submit through the president of the Commission, to be by him transmitted to Congress at the beginning of the regular session in December of each year, a full and detailed report of all its proceedings and actions and of all such plans and systems of work as may be devised, in progress, or carried out by it, and of all such additional plans and systems of work as may be devised, ma-tured, and adopted by it, with full detailed estimates of the cost thereof, and a statement of all expenditures made by it; and the Secretary of War may detail from the corps of engineers, or other corps of the Army, an officer or officers to aid them in their work, who shall serve without additional compensation to that now allowed by law; and all moneys hereby or here-after appropriated shall be expended under the direction of the Commission in accordance with the plans, specifications, and recommendations formulated, matured, and adopted in accordance with the provisions of this Act.

City's Defense in Damage Suit.

Whether the city of New York can be multced for damages when any one is injured accidentally by officials engaged in the discharge of their duties is a question that will be determined in the disposal of a pending suit. Henry W. Scheeler has sued for \$20,000 damages, on account of the death of his wife, which resulted, it is alleged, from injuries inflicted by a Health Department automobile on December 6, 1906. The Corporation Counsel, in defense of the city, will allege that the Health Department is clothed with the authority of the State, and that the city cannot be held to financial account for the results of accidents attending the performance of public

Commercial Cars and Accidents.

In reckoning the number of accidents caused by automobiles it is not customary to distinguish between commercial and pleasure vehicles. For machines of the former type, the rate would naturally be expected to be very low. In Prussia, where this question has been taken up for the first time, so far as is known, returns covering the first half of the year 1907 showed that less than 1 per cent. of all automobile accidents were attributable to the agency of commercial vehicles. The motor vehicle registrations at that time showed about 25,000 passenger vehicles as against 1,112 freight machines.

The Week's Patents.

876,974. Piston. Harry A. Knox, Springfield, Mass. Filed Sept. 20, 1907. Serial No. 393,764.

1. A piston having a plurality of channels ond the head end thereof and extending inwards from the periphery thereof, the channels being arranged to register with the inlet ports at the end of the piston stroke.

876,978. Automobile Axle. Albert J. Lehman, Columbus, Ohio. Filed Sept. 27, 1907. Serial No. 394,788.

1. In an axle, the combination of the two tubes placed axially in line with each other, said tubes having gears affixed thereto at their inner or adjacent ends and stud shafts secured projectingly in their outer ends for the reception of the vehicle wheels, a bar loosely inclosed within the inner portion of said tubes adapted to hold said tubes in line and brace the axle from flexing at the middle, said bar provided with a spider, a gear on said spider to mesh with the said gears on the tube, and means whereby said spider may be driven.

877,083. Dust Shield for Self Moving Road Vehicles. John C. B. Ingleby, Leeds, England. Filed June 10, 1907. Serial No. 378,322.

1. A self moving road vehicle, provided with a dust screen consisting of a frame and a covering of fabric which is suspended below the bottom of said vehicle and serves to cut off the air between said screen and the ground from the air between said screen and the bottom of the vehicle body, sub-stantially as and for the purpose set forth.

Igniter. George J. Schultz, New York, N. Y., assignor to Benjamin Briscoe, Tarrytown, N. Y. Filed Jan. 24, 1907. Serial No. 353,770.

1. The combination with a casing in the form of a bushing for entering into an ignition chamber, a sparking point, a body of insulating material carrying said sparking point and of smaller radius than the radius of the inner wall of the casing, a plate of translucent material carried by said insulating material, and means for clamping said plate against the casing for affording a translucent closure for the space between the insulation and the casing.

877,136. Carburetter. Alfred C. Stewart, Los Angeles, Cal. Filed March 7, 1906. Serial No. 304.651.

1. A carburetter comprising an inner oil chamber provided with an inlet valve, a casing surrounding the oil chamber, an air inlet to said casing and provided with a valve seat, said oil chamber being provided with an outlet opening, a deflector above said outlet, and a valve surrounding the oil chamber and guided to move vertically in the casing and forming therewith and with the casing and forming therewith and with the oil chamber an air inlet chamber and a mixing chamber, said valve having a por-tion co-operating with said valve seat and a deflector portion co-operating with the aforesaid deflector, to vary the size of the air inlet opening into the mixing chamber, and the outlet from the mixing chamber in correspondence.

Speed Indicating Apparatus. 877,175. Sylvester C. De Fore, Kansas City, Mo., assignor to Standard Speedometer Company, a Corporation of Missouri. Filed Nov. 30, 1906. Serial No. 345,606.

1. In a speed indicating apparatus, the

"AURORA" THE

Runabout \$775—20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS.

Aurora, Ill.

Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

COMPLETE COURSE AUTOMOBILE INSTRUCT ON

Invaluable to the owner or prospective owner of a motor car. Practical and to the point. Send for prospectus to the

Correspondence School of Motor Car Practice Tarrytown, N. Y.

WANTS AND FOR SALE

15 cents per line of seven words, cash with In capitals, 25 cents per line.

GERMAN fitter-chauffeur, reliable and sure, wants engagement as factory tester or demonstrator, or as private chauffeur; would go to the South. Best certificates and references can be given. Apply to JOS. RICHTER, 158 East 22d St., New York City.

FOR SALE—Haynes Model O, 4-cylinder 30 horsepower, in first class condition; just overhauled at factory; Sprague top. speedometer, shock obsorbers; tires in good condition; must sell; have bought another. H. B. COBLENTZ, M.D., 649 Florida Ave., N. W., Washington, D. C.

FOR SALE—No. 14 sliding gear transmissions; 90 bodies, primed only; 75 bodies, painted only; 72 bodies, painted and trimmed; 69 sets bevel drive axles and hubs; 130 frames, unassembled; 30 frames, assembled; 35 radiators; 50 tanks; 59 two-cylinder opposed engines, 5½5; 105 sets springs; 48 mufflers; 98 sets universal joints; 47 steering wheels, 14-inch; also various quantity of other parts, all suitable for 2.000 pound touring car or runabout. RANDS MFG. CO., Detroit, Mich.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.



TYPE C 50 HP

Of the highest possible grade throughout.

2800 LB4 2800.ºº WITH MACRETO 3000.ºº



Luxurious and Completely Appointed

PENNSYLVANIA AUTO MOTOR CO.,

Bryn Mawr, Pa.



A NEW SENSATION

Equip your car with

Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis Removed to New York Motor Mart Bldg.

Ħ

KINWOOD AUTOMOBILE PARTS.

ONE OUALITY—THE BEST.

OUR LEADERS:

Kinwood Perfection Radiators and

Kinwood Mechanicai Oilers.

KINWOOD PRESSED STEEL SPECIALTIES:

Frames, hoods, dashes, fenders, gasolene and water tanks, mufflers, dust and drip pans, radiator fans, gasolene gauges, fittings, couplings, etc., etc. Large facilities and dependable deliveries.

K. FRANKLIN PETERSEN. 166 Lake St., Chicago, Western Representative.

THOMAS J. WETZEL 1 1 Warren St., New York, Eastern Representative.

THE KINSEY MFG. CO., Dayton, Ohio.

THE MOTOR WORLD

Levallois-Perret, France, assignor to Societe de Constructions de Vehicles Automo-

combination with an indicating device, of a governor mechanism comprising a pair of jointed arms carrying weights, a base connecting the arms of said mechanism at one end, and having a recess in its inner surface, a shaft rigidly mounted at one end and having its loose end seated in said recess, a grooved collar carried by said shaft, and adapted for longitudinal but not for rotary movement, an arm connecting the other ends of said governor arms and adapted for revolution in the groove in said collar, a circuit terminal carried by said collar, a second terminal adjacent to and adapted for contact with said first terminal, and means for revolving said governor mechanism.

877,176. Speed Indicating Device. Sylvester C. De Fore, Kansas City, Mo., assignor to Standard Speedometer Company, a Corporation of Missouri. Filed May 11, 1907. Serial No. 373,136.

In a speed indicating device, the combination of a suitable casing provided with a scale, a bell, a raised bracket adjacent to said scale, and having a longitudinal slot therein, a contact head, a set screw extending through said slot, and supporting said head between the bracket and casing, a crank shaft, an indicator arm rigid on said shaft and projecting beneath said bracket, and means for completing a circuit through said indicator arm, and head to energize said bell, for the purpose set forth.

877,217. Wheel Rim Fastener. Ralph L. Morgan, Worcester, Mass. Filed Jan. 12, 1907. Serial No. 351,956.

1. The combination with an inner wheel rim having an elevated bearing surface, of an outer rim bearing near one side on said elevated surface, and a fastening device supporting the other side of the outer rim from the inner rim, said inner rim having means located between the rims and entirely at one side thereof for clamping the fastening device thereto.

877,233. Wheel for Motor Vehicles. George D. Ross, Glasgow, Scotland. Filed Dec. 28, 1906. Serial No. 349,764.

1. A wheel for motor vehicles comprising, in combination, two wheels, one arranged within the other, the inner one being a pneumatic tired wheel while the outer one consists of a wheel or ring having an internal diameter larger than the external diameter of the pneumatic tire of the inner wheel and being free to move relatively with said inner wheel, said plates on the outer wheel and bearings arranged between the inner wheel and said side plates, said bearings being provided with anti-friction metal.

877,234. Acetylene Generator. Samuel W. Rushmore, Plainfield, N. J. Filed May 27, 1905. Serial No. 262,583.

1. In an acetylene gas generator, the combination with a main inclosing case, of a calcium carbid basket unstably supported therein, and means arranged in the case to impart a sudden shock to the basket, said means being operated by the shocks or jars sustained by the generator.

877,260. Pneumatic Tire. Thomas B. Tiefenbacher, New York, N. Y. Filed March 16, 1907. Serial No. 362,679.

1. A pneumatic tire for automobiles and other vehicles, consisting of an air-tube, a covering sheath surrounding the same, a layer of felt interposed between the air tube and the sheath, a covering layer of elastic material, and a tread of felt secured permanently to the outer circumference of said layer.

877,267. Gearing. Robert de Valbreuze,

ciete de Constructions de Vehicles Automobiles, Levallois-Perret, France, a Corporation of France. Filed May 31, 1907. Serial No. 376,584.

1. A transmission gear for motor vehicles comprising a casing, a shaft extending therethrough, a square shaft surrounding

1. A transmission gear for motor vehicles comprising a casing, a shaft extending therethrough, a square shaft surrounding the driving shaft, a clutch member rotating with the driving shaft, a slidable clutch member mounted upon said square shaft and adapted to frictionally engage the other clutch member, a spring interposed between the shafts and bearing against said slidable clutching member, a counter shaft formed of two sections journaled in and extending through said casing, a differential gear mounted in the casing and connecting the sections of the countershaft together, a pair of gear wheels arranged within the casing and connected with the counter shaft, and a plurality of slidable pinions carried by the square shaft and adapted to engage with said gear wheels.

877,293. Gearing. Lucien Catel, Lyon, France. Filed March 29, 1907. Serial No. 365.275.

The combination of a stationary shaft, an oscillatory shaft connected to each end thereof and forming a continuation of the shaft, an arm connected to each oscillatory shaft, a rod connecting the arms together, a globular toothed wheel on each oscillatory shaft, and a pinion on a fixed axis meshing with each wheel.

877,294. Multiple Cylinder Engine. Frank L. Chase and Bertrand M. Young, Jamestown, N. Y.; said Young assignor to said Chase. Filed May 28, 1904. Serial No. 210, 1601/2.

1. In a multiple cylinder explosive engine, the combination with a crank shaft, of a plurality of pairs of aligned cylinders, the cylinders in each pair located on opposite sides of the crank shaft, reciprocating pistons located within said cylinders and operatively connected to the crank shaft, intake valves controlling the admission of motive fluid to the cylinders, exhaust valves unseating inwardly, stems on the exhaust valves projecting to the exterior of the valve casings, a cam shaft journaled adjacent the stems of the exhaust valves, cams on the cam shaft adapted to successively actuate the valve stems and unseat the exhaust valves, a longitudinal shaft extending at right angles to the cam shafts, beveled gears connecting the corresponding ends of the cam shafts to the ends of the longitudinal shaft, meshed spiral gears on said longitudinal shaft and the crank shaft, and means for adjusting said spiral gears to properly operate the cam shafts when the engine is reversed.

877,377. Starting Device for Explosion Engines with Four Cylinders. Hippolyt Saurer, Arbon, Switzerland. Original application filed Oct. 6, 1906. Serial No. 337,707. Divided and this application filed Sept. 14, 1907. Serial No. 392,913.

1. In a four stroke cycle explosion engine with four cylinders, the combination with four spring pressed inlet valves in the four cylinders, of a connection on the four cylinders above said four soring pressed inlet valves and comprising a cylindrical bore in its middle with four openings and four separate channels leading therefrom to the spring pressed inlet valves, and a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures and so driven as to make one revolution on every

two revolutions of the crank shaft, said connection being provided with two passages for each connecting two of the four channels.

877,405. Friction Clutch. Jules Caillet, Paris, France, assignor to Societe Anonyme des Automobiles Peugeot, Paris, France. Filed Sept. 10, 1907. Serial No. 392,127.

A friction clutch member comprising a clutch cone, semi-circular grooves provided on said cone and lying along elements of the sone surface, hollow india-rubber rods located in said grooves and slightly protruding beyond the circumferential surface of the cone, a leather envelope extended upon the cone surface and upon the protruding portions of the hollow india rubber rods, and small plates fixed to the cone opposite said rods to prevent same from slipping out their housings, substantially as described and for the purpose set forth.

877,437. Clutch. Charles B. King, Detroit, Mich., assignor to Northern Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed April 3, 1905. Serial No. 253,586.

1. In a clutch mechanism, the combination of a cylinder having one end closed, a flange fixed to the edge of said cylinder around its open end and extending part way to the center, a disc in said cylinder between said flange and the end of said cylinder, means for connecting said disc toward its center with the transmission mechanism, and means for supplying fluid under pressure to said cylinder back of said disc to press it against said flange to bind said disc and flange together for the purpose described.

877,438. Friction Driving Mechanism for Automobiles. John W. Lambert, Anderson, Ind. Filed Dec. 13, 1906, Serial No. 347,601. Renewed Sept. 6, 1907. Serial No. 391,702.

1. A friction driving mechanism comprising a friction disc, a driven friction disc, a rock shaft, means for moving said shaft, means connected to said shaft for bringing the driven disc into engagement with the friction disc, a pair of thrust wheels, means connecting said wheels to the rock-shaft whereby said thrust wheels will be brought into engagement with the friction disc on the opposite side thereof from the driven disc, and a stop device to limit the pressure of the thrust wheels on the friction disc without limiting the pressure of the driven disc on said friction disc.

877,471. Elastic Tire. Mathieu Brun. Lyon, France. Filed Sept. 27, 1906. Serial No. 336,430.

In a tire an elastic member comprising an outer part of elastic material externally smooth and having interior corrugations, an intermediate corrugated metallic resilient part whose corrugations engage those in the outer part, and an inner part of elastic material internally smooth and having exterior corrugations engaging those of the metallic part substantially as described.

877,512. Anti-Slipping Device for Tires. William T. Maxwell, Pittsburg, Pa., assignor of one-half to George W. Eberhardt. Pittsburg, Pa. Filed June 25th, 1906. Scrial No. 323,264.

1. An anti-slipping device for tires comprising in combination a series of securing means on the rim arranged alternately on opposite sides and in staggered relation, a chain member connected to each of said securing means and extending outwardly beyond the rim and ending in a hook, and a

continuous chain extending in zigzag manner over the tire face and having links thereof engaging said several hooks.

877,629. Pneumatic Wheel and Hub. Hamilton A. Brown, Lehigh, Iowa. Filed Nov. 1, 1906. Serial No. 342,150.

1. In an elastic wheel, a solid hub having a continuous concove groove in its periphery and anti-friction rollers on its side

faces, a solid circular frame having a continuous concave groove in its inner face, a pneumatic tube between the hub and the circular frame and the hub and the frame connected by circular plates fixed to the side faces of the circular frame and provided with openings for the purpose stated.

877,656. Spark Coil. August R. Luschka, Chicago, Ill., assignor to Motor Specialty

Manufacturing Company, Chicago, Ill., a Corporation of South Dakota. Filed Oct. 29, 1906. Serial No. 341,005. Renewed June 22, 1907. Serial No. 380,241.

1. In a spark coil of the type described, the combination of a secondary coil or winding, and a condenser arranged at the low tension or grounded end of said secondary coil

Self-Interest is the Most Practical Kind of Interest

It's the kind of interest that has led the leading top manufacturers to use Elutofoid instead of leather. Elutofoid isn't merely "just as good" as leather. It's better than perfect leather and comparatively little leather is perfect.

All Autofoid is perfect.

It's uniform in quality and size—no waste—and posssesses all the good qualities of leather without the imperfections of leather.

Elutofoid is a Twentieth Century development. It will amply repay anyone interested, to investigate it.

The American Leatherette Mfg. Co., Buffalo



CIMIOTTI GARAGE

New Yerk City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen. Try us.

> Metropolitan Agents for "PULLMAN" CARS

> > Tel. 2686 River.

HAYNES

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY Members A. L. A. M. AUKUMU, IND.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway-CHICAGO, 1702 Michigan Av.

Before You Buy a Car
telephone a Mitchell agent and tell him you
want to be shown the "silent argument" the
Mitchell offers in demonstration. He'll be
glad to show you—call him up—it's worth
money to you if you are thinking of buying
an automobile. (No obligation.)

MITCHELL MOTOR CAR CO.,
280 Mitchell St., RACINE, WIS.

MORGAN & WRIGHT TIRES **ARE GOOD TIRES**

LOCAN TRUCKS

Make and Save Money

Simple, Strong, Efficient.

Investigation will convince you. Write for catalogue

THE LOGAN CONSTRUCTION COMPANY, Chillicothe, O



THE BICYCLING WORLD and MOTORCYCLE REVIEW Will Interest You. Published Every Sat-

urday at THE BICYCLING WORLD CO.,

154 Nassau Street, New York City. Specimen Copies Gratis. \$2.00 per Year.

THOMAS

America's Champion in the New York-Paris Race.

Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO.. Anderson, Ind.

Better Because Regular

An Oberdorfer Pump never "sticks." It works ay in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St. Syracuse, N. Y.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MFRS. TOPEKA, KANSAS

TRUFFAULT-HARTFORD SHOCK ABSORBER Mark

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO.

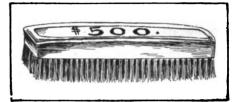
E. V. Hartford, Pres. 66 Vestry St., New York

AJAX WEARPER TIRES

Guaranteed for 5.000 Miles Riding Write for copy of Guarantee

AJAX-GRIEB RUBBER CO.

General Office, 57th St.& Broadway, New York AGENTS IN ALL LARGE CITIES



SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akron, Ohio



MICHELIN TIRE CO.,

Militown, N. J.

Apperson

"QUALITY NOT QUANTITY"

If you want a good car write us APPERSON BROS. AUTOMOBILE CO.,

Kokomo, Indiana. Members A. L. A. M.



Nots That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, "07.

Use Columbia Lock Nuts
COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.



The Ball Transmission Automobiles & Motor Boats 🗖

NEW YORK GEAR WORKS. 56 GREENPOINT AVE., BROOKLYN, N. Y.



EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St., and Broadway and 73d St. CHICAGO—20 LaSalle Street and 1615 Wabash Avenue. FOBES AUTO SUPPLY CO., Portland, Oregon. DEN FOBES AUTO SUPPLY CO., Providence, R. I. St. BOSTON—292 Devonshire Street.
BUFFALO—724 Main Street.
DENVER AUTO GOODS CO.—Denver, Colo.
PENN AUTO SUPPLY CO.—Philalelphia, Pa.
SAVELL RUBBER CO.—Jacksonville, Fla.

Digitized by Google

82 Miles an Hour with **Bosch Magneto**

At Ormond, March 6th, Bernin driving Renault Car won 100 mile race equipped with Bosch Ignition System.

Mile in 35 Seconds with Bosch Magneto

Fiat Car, driven by Cedrino on same day made new world's record for middle weight machines. Fiat also equipped with Bosch Ignition System.

MOST RELIABLE **IGNITION SYSTEM** IN THE WORLD

ROBERT BOSCH NEW YORK. INC.

The Largest Automobile Supply House in America

Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches, leaves the automobile with its original new lustre, without being sticky or greasy.

It can be used on the leather seats or tops with the very best results. Can be used on any color or kind of varnish, from the clearest white to the darkest black.

Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all automobile dealers. Price, 60 cents per bottle.

Catalog, largest of the kind, mailed on request.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave.
Philadelphia, 318-320 N. Broad St.
Cleveland, Ohio, 1829 Euclind Ave.

Boston, Mass., 202-204 Columbus Ave.
Detroit, Mich., 227 ½-229 Jefferson Av.
Buffalo, N. Y., 824 Main St.

MOTOR MAKERS



made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

The Western Motor Co., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

FURTHER EVIDENCE of SUPERIORITY

EISEMANN Magnetos

First—On March 3d at Ormond Beach, the 150 miles stock chassis race was won by Bergdoll in an 80 H. P. Benz. equipped with an EISEMANN Magneto.

Second—On March 4th, a second victory was scored again by the Benz car at Ormond Beach equipped with the

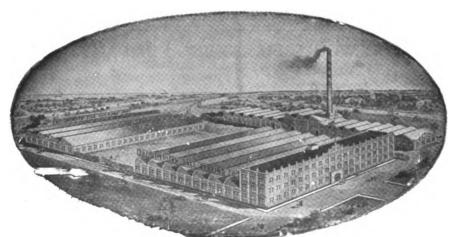
EISEMANN Magneto.

Third—The Coupe des Voiturettes of Turin was won on January 26th, by Leon Peugeot in a Peugeot car equipped with an

EISEMANN Magneto.

80% of MAGNETOS used in six-cylinder cars are EISEMANN HIGH-TENSION.

LAVALETTE & CO., 112-114 West 42d St., New York City



The output of complete Front and Rear Automobile Axies of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park CLEVELAND, OHIO, U.S.A.





\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumptio. A good proposition for automobile dealers.

Write today for Catalogue and Novelette
W. H. KIBLINGER COMPANY
Box No. 280 AUBURN, IND.

WE MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO.
Pottstown, Pa.



STA-RITE PLUGS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE and see for yourself. Double or single Porcelain,—Mica or Magneto,—all kinds. All Good Dealers.

THE R. E. HARDY CO.,
85 Watts St., New York City



How Are Your Batteries?

AMMETER WILL TELL YOU

Guaranteed, and the price is right, send for catalogue and trade discounts.

CONNECTICUT
TELEPHONE and ELECTRIC CO., Inc.
Meriden, Conn.



THE

INDE

Built to outwear an auto, and it will

Send for Booklet

Ind ex Speed Indicator Co.

Minneapolis. Minn.



SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies SPRINGFIELD METAL BODY CO., 366 Birnie Ave., Springfield, Mass.



A.O. SMITH CO.

Makers of

High-Grade Axles



Prossed Steel Frames
Steering Columns Transmissions

Steel Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street.

MILWAUKEE, WIS.

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

"No Sand Too Deep—No Hill Too Steep

2-Cylinder and 4-Cylinder
Runabouts, Roadsters, Touring Cars,
15 H. P., 24 H. P., 35 H. P.
Prices, \$850, \$1,250, \$1,500, \$2,00.

Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO., Jackson, Mich.

FRANKLIN

Why pay for useless weight? Write for catalogue of the strong high-power light-weight Franklins.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

ALUMINUM BODIES J. M. QUINBY & CO.

EST. 1834

Carriage Builders.

NEWARK, N. J.

Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture. New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jesseson Ave., Detroit, Mich.

For every dollar invested, including purchase price and maintenance, there are two or three times as many miles of actual service in a Single Cylinder Cadillac as in any other motor car.

CADILLAC MOTOR CAR CO, Detroit. Mich.

Member Assn. Licensed Auto. Mfrs.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



For catalogues, address
THE CONTINENTAL AUTO MFG. CO.



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St., New York.

\$250 "SUCCESS"

The Original Auto-Buggy,
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Co., Inc. 531 Be Belivere Ave., St. Louis, Me

McCORD Lubricators — radiators

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY
NEW YORK OFFICE—24 Broad Street.
Old Colony Building, CHICAGO.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to

The Motor World

for one year, commencing with the issue of

Name___

Address

FRANKLIN Automobiles

Is air-cooling practical? What does it do? What is the benefit?

Nobody ever questioned that if air-cooling will cool it is the ideal method. But the question still comes up "will it cool?" Look into that fairly—

Last August a Franklin Type D automobile ran from Chicago to New York in less than 40 hours, authing the water could record 18 hours, 50 minutes.

hours, cutting the water-cooled record 18 hours, 50 minutes.

A machine could not be "coddled" and make that record. It must be driven hard. In fact this Type D beat the express train that carried the relay drivers between three of the stops, else the record would have been cut still further.

The 15-day run of a Franklin Type H automobile from San Francisco to New York in August

two years ago is also still untouched.

The Franklin D engine ran 7 days without stopping, in a hot Chicago salesroom, and again at Cincinnati it ran 18 days, 3,312 miles, over bad winter roads. In this run the Franklin motor was kept going every minute and only stopped finally when the emergency brake was pulled by mistake.

Finally 5,328 Franklin automobiles are in daily use.

Can anyone doubt that Franklin air-cooling is completely practical?

You gain simplicity. Water-cooling is a complicated system. It increases the liability to trouble. If the water boils there will be over-heating. This can't happen to the Franklin motor. The temperature is more constant and more efficient. It gets more work out of the gasoline. You save the extra weight of water-cooling apparatus. The power is not handicapped. It can do more. And with the Franklin shock-absorbing construction the power can always be comfortably used. The operating expense is light; and you get all the benefit of it.

No other automobile weighing under 2000 pounds will do the work of the Franklin family touring-car Type G which weighs only 1600 pounds.

No automobile but a Franklin will carry people as far in a day and as comfortably as the Franklin 5-passenger Type D; yet it only weighs 2200 pounds. The average 5-passenger automobile weighs a third more.

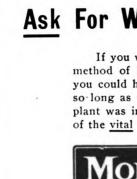
The 6-cylinder, 7-passenger Type H is the ablest and easiest touring-car in existence, yet it weighs only 2600 pounds—a thousand pounds less than the average 7-passenger automobile.

Doesn't the air-cooling question answer itself?

Write for the catalogue of Franklin models

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

Member Association Licensed Automobile Manufacturers,



Ask For What You Want When You Want It

If you were about to buy a house and the agent told you that the method of heating it was optional with you, and that for say \$500 you could have steam, hot water or hot air, would you tell him that so long as the price was the same it was immaterial what sort of a plant was installed? Not much! You'd specify. For heating is one of the vital things about a house.

MORGAN & WRIGHT TIRES

represent a similar vital part to an automobile. They probably have as much or more to do with a motorist's pleasure or annoyance as has any other one thing about his car. Then why not make sure of good tire equipment? Why not specify? Once you use Morgan & Wright tires (if only one or two in connection with other tires) for a few thousand miles, you will understand why we urge you to GET THE SPECIFYING HABIT.

There is no method of making friends equal to the method of making good.

MORGAN & WRIGHT, DETROIT

Branches, Agencies or Dealers Everywhere



Your Profit, Mr. Dealer

depends upon your sales. You must sell goods that are in demand and move rapidly, and give you a good profit. We would like to have you investigate

The Celebrated Brampton Chain

They are rapid sellers and bring many duplicate orders. Every customer a satisfied customer and a daily advertiser for you and the Brampton Chain. It is the strongest chain on the market. Made of self-hardening steel.

thain on the market. Made of self-hardening steel.

We have in stock all sizes to fit American and foreign cars.

THE PRICE is the same as you pay for any other chain, in fact all automobile chains now on the market are same price to manufacturers, jobbers, dealers and users, and our prices are the same as quoted by chain manufacturers.

prices are the same as quoted by chain manufacturers.
PRICE THE SAME, QUALITY? INVESTIGATE.
Get the best at the same price. Agents wanted in unoccupied

territory.
1907 Catalog mailed upon request; the largest of its kind ever published.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer HOME OFFICE:

97-99-101 Reade St., New York City

New York City, 924 Eighth Ave. Philadelphia, 318-320 N. Broad St. Cleveland, Ohio, 1829 Euclind Ave.

Boston, Mass., 202-204 Columbus Ave. Detroit, Mich., 227 ½-229 Jefferson Av. Buffalo, N. Y., 824 Main St.

PANHARD

Every Test Has Proven PANHARD OIL

to be the <u>one</u> cylinder oil that will not char the cylinders, spark plugs, exhaust passages and valves. This means more "life," more speed, more power, to your engine.

The very efficiency of your car depends on the <u>quality</u> of your lubricating oil. Use Panhard—the oil that will not char—the oil in the checker-board can.

GEO. A. HAWS

79 Pine Street, NEW YORK

) I L



Have you heard from Florida?

The single cylinder Cadillac driven by Dr. W. N. Stinson won the Jacksonville to Miami endurance run, 371 miles over some of the worst roads in the country, beating its closest competitor by 75 miles.

The other contestants were two and four cytinder cars

A telegraphic report from Palm Beach, Fla., under date of March 15th, and printed in the New York "Tribune" of March 16th, says:

"Nevertheless the route laid over a course that offered almost every kind of obstacle for a contest of its kind and the highest praise is deserving of the 10 H. P. Cadillac driven by Dr. W. N. Stinson, of Jacksonville, which came in first in the actual running time of 30 hours and 18 minutes."

The New York "Evening Post", under date of March 13th, prints the following telegram from Miami, Fla.:

"Miami, Fla., March 13.—Dr. William Stinson finished the Florida road race today at noon, fully seventy-five miles in advance of his nearest competitor. His official running time for the 371 miles was 37 hours 19 minutes; his actual running time being seven hours shorter. He drove a 10 horsepower Cadillac runabout, which carried three persons."

Cadillac Wins Three Prizes In One Contest

The New York "Globe" says, March 13:

"Dr. Stinson's Cadillac is in Class B, and wins the Fort Pierce cup, the first prize in this class, also the Palm Beach cup for the car in this class that made the fastest time between Fort Pierce and Palm Beach. The Miami trophy also goes to the Globe car (Cadillac) because it made the best all-round showing on the whole run, irrespective of power."

Cadillac Motor Car Co., Detroit, Mich.

Members Association Licensed Automobile Manufacturers.

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



Clean Sweep for the White in California Hill Climb

The White Steamer won all three events in which it was entered in the hill-climbing carnival held at San Francisco in connection with the recent automobile show. A 30 H.P. White touring car won the class for cars costing up to \$3500, and a 20 H.P. White touring car won in the \$2500 class. In the free-for-all, the same 30 H.P. car, with body removed, again triumphed. It made the climb in 1:385, which is 16 seconds faster than that made by its nearest competitor.

The superiority of the White in hill-climbing has been demonstrated in every public contest in which it has competed or, more properly speaking, been allowed to compete. Hill-climbing ability is the true test of real power, of available power, of power at the rear wheels, and it is evident that hill-climbing contests furnish the real demonstration of what the various systems of motive power can do, and that the tables of "rated horse-power" are of purely theoretical interest.

Write for Literature

THE WHITE COMPANY CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Philadelphia, 629-33 N. Broad St.

Boston, 320 Newbury St. Chicago, 240 Michigan Ave. Cleveland, 407 Rockwell Ave.

National

Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K-4-cyl., 4%x5 **\$3500**

Model R-6 cyl., 41/2 x 43/4 \$4200

Model N-4 cvl., 5x5 **\$3700**

Model T-6 cyl., 5x5 \$5000



Write for Particulars

National Motor Vehicle Company

1007 East 22d Street INDIANAPOLIS.



RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



For Antomobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

TRONG-DURABLE
CALELESS-RUSTLESS MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver CANTON, OHIO THE STARK ROLLING MILL COMPANY,

A Spark Plug that misses after the first fire

is about as useless for ignition purposes as a parlor match. Continuous, reliable ignition; a hot, snappy spark with



You don't have to guess with the Wico Plug. It possesses micrometer adjustment and the gap can be set to a known distance.

Wico Spark Plugs are made in all standard sizes. Price, \$1.00. A sample sent upon receipt of price. Write Dept. 20 for catalog. For sale by Agents and Dealers Everywhere.

Witherbee Igniter Company

THREE FACTORIES.

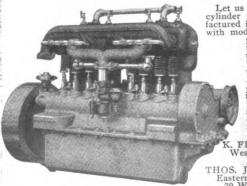
Detroit . 220 Jefferson Ave. New York 1876 Broadway Chicago 1429 Michigan Ave. Baltimore Office-510 Continental Trust Building.

Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. [We do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. [It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. [A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. [It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. [Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company. South Bend, Ind.

CONTINENTAL MOTORS ARE STANDARD



Let us quote you on two and four cylinder motors. They are manufactured in our new factory equipped with modern machine tools and all parts made with special tools and jigs, therefore they are interchangeable. Two and four cylinder types 12 to 50 horsenower. Motors have self-contained oiling system, absolutely insuring lubrication and are ready for coupling any standard magneto. Also clutches and transmissions. Send for catalogue.

K. FRANKLIN PETERSON,
Western Representative
166 Lake St., Chicago, Ill.
THOS. J. WETZEL,
Eastern Representative,
29 W. 42d St., New York Citty.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich.

As It Was In The Beginning

Maxwell"

Car is now and (I promise) ever shall be an honest Car—honestly designed—conscientiously built—truthfully sold and in good faith backed up by its makers after it is in the hands of the buyer.

Times and conditions may change, but principles never do.

Maxwell principles of construction—chief among which are Thermo-syphon cooling; Unit Power Plant with three point suspension; and metal body,—are sound; all have been time-tried and road proven.

Here and there you'll find a maker who has adopted one or more of these Maxwell features, but only in Maxwell Cars do you find a combination of all of them.

I always feel sorry for the maker or sales manager who finds it necessary to contradict year after year all he has said previously, or who must devise new "talking points" to cover up past mistakes. I feel more sorry for the people who are beguiled into buying his cars.

Maxwell advertisements of four years ago expounded the same theories and principles as do those of 1908—and those of next year will be consistent with this. That's only one expression of Maxwell stability—it's one reason why Maxwell owners are such a contented lot.

Our catalog is free.

MAXWELL-BRISCOE MOTOR COMPANY

P. O. Box 106, Tarrytown, N. Y.

Members A. M. C. M. A.

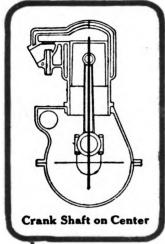
Factories: Tarrytown, N. Y.

New Castle, Ind.

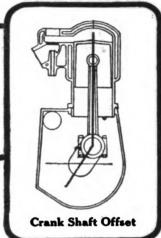
Pawtucket, R. I.







Rambler



Why the Offset Crank Shaft

One of the greatest improvements in motor construction is the offset crank shaft. Its advantages are positive and direct.

First—By practically eliminating the dead center the efficiency of the motor is greatly increased through the greater leverage and more direct thrust from piston to crank shaft.

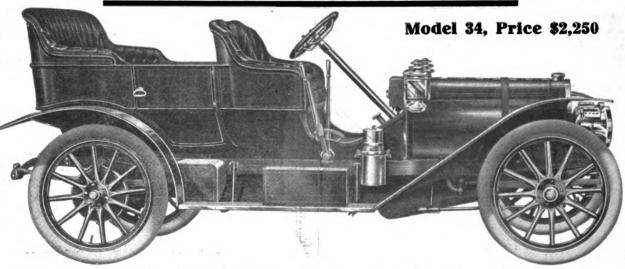
Second—Increased life of the motor through reduction of side thrust on cylinder walls and consequent saving in wear.

Third—Reduction in vibration and increased steadiness of running through more direct application of power generated in the cylinders.

Like many other fundamentally good features this must be done right and in the Rambler it is right both theoretically and practically and the result is a motor that combines the highest degree of efficieny with long life and economy of operation.

It is this and other features of equal value that make

The Car of Steady Service



This four cylinder chassis, equipped both as a 5-passenger touring car and 3-passenger roadster Price of each style \$2,250. The Rambler Utility Car with double opposed motor, \$1,400

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

Branches and Distributing Agencies:

Chicago, Milwaukee, Boston, Philadelphia, San Francisco.

Representatives in all leading cities.

Volume XVII.

New York, U. S. A., Thursday, March 26, 1908.

No. 26

WINTON WOULD MAKE DIRECT SALES

Issues a Suggestive Statement, but Leaves
His Attitude Toward Agents Open to
Considerable Speculation.

Reports are afloat that the Winton Motor Carriage Co. has abandoned the agency system and hereafter will deal direct with purchasers. They undoubtedly grow out of the company's recent announcements advising intending buyers that the surest way to obtain lasting satisfaction is to purchase from the manufacturers themselves, which advice has been printed in the form of advertisements and circular letters, many of which have found their way into Winton agents' territory. That many of the agents are considerably perturbed is not to be denied, but when Manager Churchill of the New York Winton branch was asked whether the announcements indicated that the company had broken away from agencies or whether they presaged a move of the sort, he said he was not in position to make reply.

"I have no information to that effect," he said. "The agents attached to this branch have not been disturbed and have expressed no dissatisfaction. Of course, we think pretty well of the branch house system, but more than that I cannot say. Definite information must be obtained from the factory."

Sales Manager Shanks already had issued a statement bearing on the subject in which while he unequivocally suggests the advantages of "patronizing the maker direct," he does not make plain whether the company has or intends to cut loose from agents. He says:

"A protest against our statements came to us the other day from a prominent dealer in Pittsburg, but, oddly enough, the protest itself rather supported our arguments. For this dealer, proclaiming that he is not among those dealers who frequently shift agencies, added that he had held a specified agency

three years. If an agency connection of three years is one of which a dealer may be proud (and it probably is), doesn't that alone serve to show that few agencies continue as long as three years? Any doubt that may exist on this point readily can be dispelled by reference to agency directories covering two or three years. It will be found that not two per cent of all the dealers in America are handling exactly the same lines now that they were in 1906—two years ago.

"To provide a remedy for this ill, the Winton company owns and operates its own branch houses in ten of America's greatest cities. These branches are devoted exclusively to Winton cars and are not subject to the shifting of agencies. It is the purpose of each branch to give Winton owners thorough and enthusiastic co-operation and satisfaction, not only when the car is new, but so long as the owner retains it, whether that be two years, or ten years, or more. And the buyer is best assured of such treatment when he patronizes the maker direct, for then he knows that the seller's interest and loyalty will be centered upon the same make in future years that it is to-day."

Hercules Tied up by an Injunction.

The Hartford Suspension Co., maker of the Truffault-Hartford shock absorbers, has been granted an injunction against the Motor Car Equipment Co., of New York, restraining it from manufacturing, selling or using the Hercules shock absorber, which the equipment company already had ceased to market. The injunction grows out of the suit brought by the Hartford company alleging infringement of its patents, No. 303,589.

White Company Opens Pittsburg Branch.

On April 1st, the White company will open a branch office in Pittsburg, having secured the new and commodious garage at 138-148 Beatty street, formerly occupied by the Liberty Automobile Co. William B. Yoder will be in charge of the branch; his territory will include the western counties of Pennsylvania.

POPE RECEIVERS ATTACKED ANEW

Toledo Interests File Second Petition for Their Removal—Both Cases to be Heard To-morrow.

Petitions inspired by the Toledo interests unfriendly to Albert L. Pope, and which seek to have him removed as receiver of the Pope Motor Car Co., are becoming so numerous that it soon will be difficult to keep count of them. In addition to the petitions to that end filed in the United States Circuit Court at Toledo last month, and in the United States court at Indianapolis only two weeks ago, a second petition was lodged with the court at Toledo on Friday last, 13th inst. The ostensible petitioners in the latter instance are the Northern National Bank of Toledo, the National Bank of Commerce and the Bostwick-Braun Co., of Toledo, and the Capital National Bank of Indianapolis, but the same attorney is the moving spirit in both cases. Indge Taylor set to-morrow, Friday, March 27th. as the time for a hearing on both motions. Receivers Pope and Yule and their attorneys are in Toledo and it is probable that the matter will be threshed to a finish. The day before the second Toledo petition was lodged, Albert L. Pope filed a claim for \$787,987.84 against the Pope Motor Car Co. and Judge Taylor appointed Irvin Belford a commissioner to investigate its validity.

The petitioners allege that they are creditors of the Pope Motor Car Co. in the sum of \$240,000, and that Receivers Pope and Yule are endeavoring to smother their claims by presenting a claim of the Pope Manufacturing Co.. the parent company, of Hartford, Conn., for \$800,000, in which both receivers, it is charged, are personally interested.

It is charged in the petition that the \$800,000 claim is irregular. In support of the allegation there is presented a statement of the Toledo concern's earnings for four years

from July 31, 1903, to July 31, 1907, which were \$1,904,000. This sum was increased by \$360,000 earnings from the Indianapolis plant, which is a part of the Pope Motor Car Co. In view of such earnings, the petitioners assert, no claim of \$800,000

could be made legally by the Pope Mfg. Co.

That A. L. Pope, together with his father, A. A. Pope, own more than a majority of the stock of the Pope Mfg. Co., on whose books is held the stock of the Toledo concern, is also set forth in the petition. For this reason the creditors demand the removal of the present receivers and the appointment of disinterested persons, although as a matter of fact, it is well known that the men behind the scenes are bent only on securing Pope's scalp; they have no real objection to Yule.

As in the first petition, it is also charged in the one filed on Friday last, that the creditors of the Toledo plant were denied a voice in the selection of receivers and that instances of partial administration justify their petition for new directors of the affairs of the Toledo plant.

The Week's Incorporations.

Wilmington, Del.—J. R. Richardson Auto Co., of Wilmington, under Delaware laws, with \$50,000 capital. Corporators not named.

Philadelphia, Pa.—Auburn Motor Car Co., under Delaware laws, with \$10,000 capital. Corporators not named.

Seattle, Wash—Sound Motor Co., under Washington laws, with \$8,000 capital. Corporators—Walter M. French, E. P. Frin, S. S. Munk.

Binghamton, N. Y.—H. B. Doherty Co., The, under New York laws, with \$5,000 capital; to manufacture motors. Corporators not named.

Chicago, Ill.—Pietsch Auto & Marine Co., under Illinois laws, with \$30,000 capital; to manufacture and deal in machinery. Corporators—L. W. Pietsch, O. E. Pietsch, C. J. Ward.

Jersey City. N. J.—Maxwell-Briscoe Export Co., The, under New Jersey laws, with \$50,000 capital; to manufacture motor vehicles. Corporators—Benjamin Briscoe, J. R. Turner, R. Irwin.

Fort Wayne, Ind.—Black Mfg. Co, The, under Indiana laws, with \$10,000 capital; to manufacture and sell automobiles and parts of automobiles. Corporators—Marion Black, A. L. Randall, Edward White, Donald Hayden.

New York City, N. Y.—Radio Battery Co., under New York laws, with \$100,000 capital, to manufacture and install batteries, storage batteries, etc. Corporators—R. B. Respess, H. L. Robinson, J. W. Kinne. New York City, N. Y.

Newark, N. J.—Automobile Co. of New Jersey, under New Jersey laws, with \$25,000 capital; to engage in the hire and sale of automobiles. Corporators—William V. Morgan and Silas Weston, Montelair. N. J.; Stanford Rogers, Glen Ridge, N. J.

THE MOTOR WORLD

In the Retail World.

E. H. McGibbon has had plans drawn for a large garage to be erected at Venice, Cal. It will be a two-story structure and will cost \$7,000.

James A. Quinn, of New York City, has set his bait for the seashore tire trade. He has rented for a term of three years the store at 77 Brighton avenue, West End, N. J., and will open on April 1st.

With G. L. Nickerson, J. S. Brown, and C. W. Sprague as its composition, the Nickerson Automobile Exchange has opened at 309 Fourteenth street, Washington, D. C. The firm will deal in second hand cars.

A. D. Perkins, a former dealer of Los Angeles, has returned to that city after conducting a manufacturing business in Portland, Ore., and has opened at 605-7-9 West Seventh street, as the Perkins Automobile Exchange. He will carry on a trade in second hand cars.

Harry J. Beebe and Charles Haigh, of Alpena, Mich., have formed a partnership and will open a garage in that place. They will do a general repair business and carry a large line of sundries, besides having the agency for several cars.

George E. Hume has been appointed receiver for the Boyd Automobile Co., of Indianapolis, on the petition of the Warner Instrument Co., and other creditors. The company claims to have assets of \$7,500 and liabilities of a lesser sum.

Cairo—in Illinois, not Egypt—has a new concern, the National Motor & Supply Co., which will handle the Olds motors and supplies. F. L. Harp, long connected with the Three States Implement & Buggy Co., of that city, is head of the new concern.

The New University Garage, at 166-168 St. John street, New Haven, Conn., has been purchased by Gardner E. Wheeler. This garage is unique in that automobiles are stored in separate "stalls," each provided with private lock and key.

The building on Lake street, Cadillac, Mich, formerly occupied by the Cadillac Machine Co., is being rebuilt for a garage. The name of the company has not been decided upon, but it is stated that it will have the agency for several well known cars. Wynter C. Massey will be in charge of the business.

All the machinery in the Redlands Auto Co.'s garage at Redlands, Cal., has been purchased by Robert Leith and J. C. Duncan, owners of the Casa Loma garage at the same place, and the repair business of the former will be transferred to the latter. J. L. Warner was associated with Leith and Duncan in the purchase.

Suit has been brought against P. F. Ryan of Schenectady, N. Y., to recover the proceeds of a car he sold for Mrs. Ada B. Mills of Lansingburgh. Mrs. Mills was to receive \$300 in case Ryan disposed of the car, and anything realized above that amount was to be his commission. It is alleged

that Ryan disposed of the car in exchange for another car and \$300 cash, but has paid nothing to Mrs. Mills as called for by the agreement.

The Columbus Auto Supply Co., with Cincinnati men as its backers, has been formed in Columbus, and has located at 342 South High street. This makes the first exclusive supply store in Columbus. The men interested in the venture are F. A. Cromley, F. P. Schopper, Jr., G. Schwendler, and W. R. Clark. The first named will manage the business.

W. E. Brown, proprietor of the Tippecanoe Automobile Co., Lafayette, Ind., has disposed of his interests to a company composed of Daniel J. Harrington, Edward J. Gallagher, John F. Ruger and Clarence Brown. The new concern will be known as the Lafayette Automobile Co., and will become incorporated under the laws of Indiana, with \$10,000 capital stock.

Several changes will be made along Newark's (N. J.) automobile "row" within the next few weeks. J. W. Mason will remove to his new building on Halsey street, near Marshall, and the present location at 289 Halsey will be occupied by a new firm. The F. E. Boland Co., which, by the way, will change its name, Boland having withdrawn from the company, his interests having been acquired by W. H. Weldon, will occupy a new building at Halsey street and Branford place. It will be a one-story structure, 50x60 feet. The Linkroum Automobile Co., which has been located at 17 Bank street, will occupy the building at 239 Halsey street, which will be vacated by the Boland company. Other changes are in prospect.

Conwell Succeeds to Lull's Position.

J. S. Conwell, who for the past year has been general northern representative for the Auto Vehicle Co. of Los Angeles, manufacturers of the Tourist car, has been appointed general manager of the company, with headquarters in Los Angeles. Conwell takes the place made vacant by the death of Lynn C. Lull, who passed away suddenly in Detroit several weeks ago.

To Manufacture a New Transmission.

The Black Mfg. Co., which has incorporated in Indiana with an authorized capital of \$10.000, and is located at Fort Wayne, will make a specialty of a transmission mechanism invented by Marion Black, one of the corporators. In addition, the company may manufacture and deal in automobiles and parts.

New Factory for Laman Tops.

The L. L. Laman Auto Top Co., Utica, N. Y., has moved its factory from 75 Lafayette street to the large building at 179 Blandina street. In its new location the company will have more than 30,000 square feet of floor space, considerably more room than was to be had in the old quarters.



BRISCOE NAMES THE COMMITTEES

Comparatively Few Changes in Personnel of A. M. C. M. A. Management—Smith Again Heads Show Committee.

With comparatively few changes in their makeup, Benjamin Briscoe, chairman of the committee of management of the American Motor Car Manufacturers' Association, has continued all of the committees that served during 1907.

The show committee, which always is an active one, will again have H. O. Smith, president of the Premier Motor Mfg. Co., as its chairman. Associated with him will be S. H. Mora of the Mora Motor Car Co., and R. M. Owen, of the Reo Motor Car Co. The other committees are as follows:

Tours and Races—W. C. Marmon, Nordyke & Marmon Co., chairman; H. O. Smith, Premier Motor Mfg. Co.; A. C. Newby, National Motor Vehicle Co.

Good Roads—Chas. E. Lewis, Jackson Automobile Co., chairman; James Couzens, Ford Motor Co.; R. E. Olds, Reo Motor Car Co.; H. B. Krenning, Dorris Motor Car Co.

Legislation—R. E. Olds, Reo Motor Car Co., chairman; C. G. Stoddard, Dayton Motor Car Co.; A. C. Newby, National Motor Vehicle Co.; R. A. Palmer, Motorcar Co.; R. E. Graham, Acme Motor Car Co.

Membership—W. H. Van Dervoort, Moline Automobile Co., chairman; Morris Grabowsky, Rapid Motor Vehicle Co.; E. K. Burroughs, Abendroth & Root Mfg. Co.

Advertising and Publicity—Barney F. Everitt, Wayne Automobile Co., chairman; Harry Fosdick, Moon Motor Car Co.; G. B. Louderback, Buckeye Mfg. Co.; Theo. P. Bailey, St. Louis Car Co.; Leon Myron Bradley, New York office; Charles E. Duryea, New York office.

Finance—James Couzens, Ford Motor Co., chairman; W. G. Morse, Atlas Motor Car Co.; J. B. Bartholomew, The Bartholomew Co.

Standardization and Technical—John D. Maxwell, Maxwell-Briscoe Motor Co.; Henry Ford. Ford Motor Co.; R. S. Crawford, Crawford Automobile Co.; L. P. Mooers, Moon Motor Car Co.; R. E. Olds, Reo Motor Car Co.

Freight and Transportation—Harry A. Knox, Atlas Motor Car Co., chairman; H. W. Mack, Mack Bros. Motor Car Co.; R. Harry Croninger, Pennsylvania Auto-Motor Co.; J. N. Willys, Overland Auto Co.; G. D. Wilcox, Gearless Transmission Co.; C. C. Hanch, Nordyke & Marmon Co.

Tires—G. V. Rogers, Mitchell Motor Car Co., chairman; James Couzens, Ford Motor Co.; Frank Briscoe, Brush Runabout Co.; O. Stevenson, York Motor Car Co.

Agencies-W. H. Van Dervoort, Moline

Automobile Co., chairman; A. R. Welch, Welch Motor Car Co.; H. S. Leyman, De-Luxe Motor Car Co.; Frank L. Pierce, Gaeth Automobile Co.; H. B. Larzelere, Chadwick Engineering Works.

Many Judgments Against Archer & Co.

Three judgments, aggregating \$13,742, were entered on Saturday last against Archer & Co., Inc., who formerly did business at 1597 Broadway, New York, in favor of Walter B. Manny, on three notes of the corporation, made on December 27. 1907, payable at the Oriental Bank, which were not paid. The notes were indorsed by Allison M. Archer, president of the company, and the judgments are also against him. The corporation gave up business some time ago. During the past several months the sheriff has received eight executions, aggregating \$7,270, against it, but found nothing to levy upon. The corporation was organized about 18 months ago with a capital stock of \$10,000, and handled the Hotchkiss car, which agency the Hotchkiss Import Co. recently took over.

Dragon is in the Legal Toils.

On petition of John C. Calhoun, whose claim is for \$2,400, money loaned, the Equitable Trust Co. and Samuel C. Myers have been appointed receivers for the Dragon Motor Car Co., Philadelphia, the company assenting to the receivership, but denying insolvency. The J. G. Brill Co., whose former car shops were rented to the Dragon people for a factory, also have made a levy on the company. It appears that even the Dragon Automobile Co., which was the style of the concern before its recent reorganization, had not paid its rent for five mosths.

A. C. A. Opens Supply Store.

The Automobile Club of America has embarked in the supply business, a store having been established on the third floor of the big club house on West Fifty-fourth street, New York, in which a complete stock of tires and accessories will be carried. In the announcement of the opening of the store, members of the club are promised "a large discount from current market prices on all supplies."

Receivers to Continue E. V. Business.

Judge Shumway, sitting in the Superior Court at Hartford, Conn., last week issued an order empowering the receivers, Halsey M. Barrett and Henry W. Nuckols, to continue the business of the Electric Vehicle Co. As compensation for their services, he also authorized the receivers to pay themselves \$900 each, on account.

Mansuay Goes from Fisk to White.

Louis M. Mansuay, for the past four years assistant manager of the Fisk Rubber Co.'s New York branch, has resigned that position to take up with the White Co.'s New York store. His change will become effective April 1st.

DURYEA PLANT WAS SOLD TWICE

"Insufficient Funds" Nullifies First Sale and Middleby Then Bids \$10,000 Less —Will Operate the Factory.

The real estate and machinery of the bankrupt Duryea Power Co., Reading, Pa., has been sold to Joseph W. Middleby, Jr., for \$15,000.

On Tuesday of last week the plant was offered for sale. The bidding was quite spirited between D. Lipman, of New York City, and Mr. Middleby, who is a resident of Malden, Mass. The latter bid up to \$25,200, and Mr. Lipman bid to \$25,250, the plant being declared sold to him.

When he tendered a check for 10 per cent. of the purchase price, it was ignored at the bank on account of lack of funds, and the trustee again offered the plant for sale on Wednesday morning. Mr. Middleby was the only bidder this time and the trustee declared him the purchaser at his price, \$15,000.

Mr. Middleby, it is said, will conduct a new company, and will continue the manufacture of automobiles. Ruring the week 11 automobiles, also several lathes and tools were sold.

The purchasers of the automobiles were as follows: M. M. Thew, New Jersey, \$390; Dr. Francis F. Brobst, Reading, \$385; Dr. L. H. Moss, Massachusetts, \$375; James McClellan, New Jersey, \$390; H. W. Limbaugh, Harrisburg, \$355; E. L. Sturgis, \$350; C. F. Fister, New Jersey, \$340; Joseph W. Middleby, Reading, bought four machines for \$330, \$355, \$380 and \$250, respectively. The latter is a second class machine.

Charles E. Duryea is preparing to engage in the manufacture of motor buggies. That enduring pioneer long has had unbounded faith in the future of that type of vehicles and proposes to "show his faith by his works."

To Make Buggies in California.

N. M. and Fred Anderson, of Los Angeles, Cal., are making arrangements for the manufacture of motor buggies in that city. They already have built one vehicle, which incorporates several original features, and which was recently put to the test in a long tour through Southern California and Mexico.

Chadwick Completes Move to Pottstown.

The Chadwick Engineering Co. have completed their removal from Philadelphia to Pottstown, Pa. They now are in full possession of the huge new factory which was erected for them at the latter place.

Earl Makes Big Increase of Capital.

The Earl Motor Car Co., Kenosha, Wis., has increased its capital stock to \$350,000; previously it was but \$25.000.



"Keep Your Eye On Continentals!"

Continental Tires Win Long Island Endurance Contest!



Frayer-Miller Car, Winner of Contest, Equipped with Continental Tires.

A COMPETITOR'S CLAIMS:

Long Island Endurance Contest

Thirteen of the 21 cars used Diamond casings and tubes. Highest competing make equipped 3 cars. Contest won on Diamonds. Plenty of tire trouble all told but not with Diamond tires.

What the Frayer-Miller Company says:

New York, Feb. 26, 1908.

MR. J. B. COTHRAN,

Continental Caoutchouc Co., 43 Warren St., City.

My Dear Mr. Cothran:-

We wish to congratulate you on the way the Continental Tires (with which our car, the winning Frayer-Miller was equipped in the Long Island Automobile Club's Economy Contest) stood up over the 242 miles of this run, under the worst road conditions, the roads being frozen and having deep ruts in them which invited continual danger to our tires.

Our car carried five heavy passengers and we did not have a puncture or a blow-out, and in fact did not touch our tires during the entire run.

We did not even think it necessary to carry an extra shoe.

Wishing you continued success, we beg to remain,

Very truly yours,

FRAYER-MILLER COMPANY,

(Signed by) H. H. Knepper, Manager.

VICTORIES FOR CONTINENTAL TIRES

At Ormond, Florida, in March, "Automobile Club of America Cup"; Winning Car "FIAT," Second Car "CHRISTIE," both on Continental Tires. The leading car continued and made a world's long distance racing record, 300 miles, 233 minutes, 44 seconds, 77 miles an hour.

Also, "Minneapolis International World's Championship Trophy." won by the "FIAT" on Continental Tires; and competitive mile record, standing start; amateur mile record; and the world's middle weight mile record, 35 seconds flat.

CONTINENTAL CAOUTCHOUC COMPANY, J. M. GILBERT, Gen. Mgr., 43 Warren St., NEW YORK
Representation Everywhere.





Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . . 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

La Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MARCH 26, 1908

Suggestiveness of the Savannah Race.

The marked success of the big stock car race in Savannah is suggestive of many wholesome truths and points to a more wholesome state of sport. The truths are plain enough and strong enough to make it advisable to toll the knell of the so-called racing car, which is but another term for the "freak" car, which is dangerous to man and beast and of no practical earthly use.

The even, consistent performance of the cars in the Sayannah race, the fact that all save one, which had met with an undistressing accident, were in the running at the conclusion of the contest, and that the tires gave a good account of themselves, constitute a bright page in the history of the sport, while the crowd in evidence and the interest created is evidence that "freak" cars are not necessary to arouse and attract the public.

Trophies that serve such useful ends and that promote such sport, achieve more real

and lasting and far reaching benefits, serve more practical purposes, and teach more practical lessons, and save more lives than all the Vanderbilt cups which may be offered for the encouragement of "freaks."

The A. A. A. should not permit the lesson to go to waste. Now that it is showing a disposition to give heed to its disinterested supporters and well wishers it should go further in the same direction by adopting a limit for competition that would relegate the "freaks" to where they belong—the scrap heap. And having adopted a limit, the A. A. A. should hold fast to it and not do as was done for one of the races at Savannah, i. e., stretch the limit in order to oblige a splendid gentleman whose car was a trifle over the dimensions originally fixed.

The governing motorcycle organization had dared to adopt a limit and to hold unswervingly to it, and the manufacturers forced to keep within that limit, have done so. It has encouraged practical design, has killed the "freak" and saved the manufacturers themselves no small amount of money. What the motorcycle body has done, the A. A. A. should do, and it can do it if it so wills, and is not thrown off its balance by "too much Vanderbilt cup."

Promoting Utilitarian Uses.

What is reckoned one of the most important uses of the small runabout and light touring car, if not its most important use, is the utilitarian service which it performs for the physician and the business man who is in need of frequent and important journevs over comparatively short distances. The needs of the country doctor, are usually cited as typical in this respect, but they are by no means the only instances in which the requirement is imperative, for transportation such as the light and economical motor car is capable of providing. Obviously, it is to the best interest of both manufacturer and dealer to foster and protect this section of the market, which besides being a voluminous and intelligent one, possesses the desirable feature of absolute and consistent stability.

There can be no question that the manufacturers have done a great deal in catering to this branch of the field, nor that they appreciate its importance. It is open to discussion, however, whether the average agent is exerting himself to his utmost to develop all the business that is latent in this quarter. A successful continuance of the exploitation which already has gained such

a good footing depends quite as much upon the wise handling of the repair business as upon the booming of new types or new models of old ones. This consideration demands the attention of the dealer most strongly.

It is essential that the man who uses a motor car because he requires its services rather than because he inclines to it as a pastime, be taught to get the most work out of it with the least possible expenditure of time and money. He must be taught how to keep his car in service all the time; how to have it ready to answer the instant's demand, whether by day or night; and how to reduce his expenses to their lowest terms. This principle may tend to reduce the repairman's income from any one customer. The chances are that it will not work out in that way ultimately, however, since customers who are so treated usually continue as customers to the end of all time, and form the best possible advertisement of which a business can boast.

In this connection, it may be a lesson'can be learned from the methods of the watchmaker, who invariably has a watch to lend for every reputable watch brought in for repairs. Carried to extremes, such a practice would be ruinous to the automobile repairer. But in the case of men who must have their cars for daily service, it would be profitable for the repairman to have a substitute machine or two, such as always are to be found about almost any garage. and which could be put into service temporarily pending the release of the owner's machine from the shop. All things considered, the cost of such a policy would be comparatively slight, particularly if the wear and tear of the substitute machine were covered by a nominal rental figure. But even reckoned at a moderate cost to the repairman, the return would be sufficiently great, measured in the confidence and security of the customer's patronage, to well repay the small outlay.

Problem of the Commercial Vehicle.

It is difficult to appreciate the importance of the wise and conservative development of the commercial yehicle for handling heavy loads over long hauls. The utility motor vehicle is slower in coming into its own that the pleasure vehicle has been, though not slower, perhaps, than is to its own best interests. Its leisurely development up to this time, has been sufficiently unspectacular to escape the notice of unscrupulous and shyster promoters, so that

it is largely true, that what has been done for the commercial vehicle, has been done earnestly and with the wise purpose of furthering its ultimate growth to the highest possible degrée. Yet uninteresting though the type may be, from the standpoint of present worth in the monetary sense, it offers a field for endeavor and a prospect for

future usefulness such, that no thinking man

in the industry can afford to overlook its

specific properties and the difficulties which

block its evolution.

One of the most important phases of the problem, and one which is destined beyond a doubt to become a very large factor in its ultimate success, is that of the road train. Primarily, it may be, the idea in itself is unattractive, because it implies a blocking of the highways with huge, slow-moving vehicles, and because the need for it is not apparent. The absolute necessity of transporting large volumes of freight at low costs, however, coupled with the existing limitations to the increase in carrying capacity of the single vehicle, which are daily becoming more apparent, make the road train the only really plausible solution of the problem. What considerations lead to this conclusion, are set forth in another column. Suffice it to say in this connection, that they are sufficient, and that from the results of actual service, it has been proved already, that the road train is not the unmanageable and unprofitable proposition a casual glance at its properties makes it appear.

Briefly recounted, the advantages of the road train are these: The carrying capacity of the train may be largely proportional to the demand of the paying load, since ordinarily, only as many trailers need be used, as are required for the load; the service is more economical in its nature because of the possibility in many cases of working the tractor on practically full time, doubling or trebling the number of trailers, and providing for simultaneous loading and hauling of the full equipment; more economical maintenance, since the disability of one or more trailers need not lay up the entire system; better road service, since the traction is distributed over the whole train-in the more advanced systems-so that a slough of greater length than the train is required in order to mire it; the practical elimination of skidding for the same reason; reduced wear on the road and reduced wheel and driving gear wear, by virtue of load and traction distribution; and the me-

THE MOTOR WORLD

chanical economy which comes with the concentration of the power plant in the largest possible units.

There are many ways in which regular service for road trains might be established with profit, where the use of individual motor vehicles could not be made to pay. The principle involved is merely that of handling the load on a wholesale basis, and on a large scale, instead of on the retail plan. The man with only enough business to support one truck is not always able to run that on a paying basis, because he cannot afford sufficient "plant" to reduce his maintenance cost. The man or group of men, with sufficient business to support a half dozen trucks, or, what is the same thing, one efficient tractor and four or five trailers, can well afford to pay for the expert attendance, surplus equipment for substitute service, a small repair shop, and repairs.

The profits from railroading are greatest, generally speaking, where the greatest volume of business is handled. Even without actual knowledge in the matter, it would be safe to assume that commercial motor haulage would yield returns somewhat on the same plan. That the bulk of railroad earnings come from freight transportation, suggests an extension of the parallel which is too obvious to be overlooked.

Inconsistency of Frelinghuysen.

Why do not the New Jerseymen who are waging war on Frelinghuysenism touch the author of the jug handled justice, which is implied by that term, on the spot where he is weakest? Senator Frelinghuysen is not a resident of New Jersey. His office and his home both are in New York and long have been. In other words, and in political parlance, Frelinghuysen is, from the New Jersey standpoint, a carpetbagger. As he thus is a non-resident lawmaker, the Jerseymen have additional cause for offense, while New Yorkers also have reason for increased objection that one of their own number should, for political effect, force them to pay tribute to New Jersey while he is free to use their roads without let, hindrance or cost. The wise warriors always seek out the weakest point of their opponents and keep hammering at it. The keynote for the campaign against Frelinghuysenism is plain.

Encouraging the Private Owner.

Suggested in a jocular vein, it is stated that the New Jersey Automobile and Motor

COMING EVENTS

March 15-April 1, Omaha, Neb.—Omaha Automobile Dealers' Association's annual show in the Auditorium.

March 23-28, Indianapolis, Ind.—Indianapolis Automobile Dealers' Association's show week.

March 31-April 4, Salt Lake City, Utah—Automobile show in Auditorium skating rink.

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

April 6, 7 and 8, Denver, Col.—Annual show in Mammoth skating rink.

April 6-11, New York City—New York Automobile Trade Association's carnival week.

April 11, San Francisco—California Automobile Dealers' Association's hill climb.

April 16-18, Memphis, Tenn.—Automobile show promoted by the Automobile Dealers' Association of Memphis, in the Auditorium.

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

May 5-6, Harrisburg, Pa.—Motor Club of Harrisburg's second annual endurance run.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

Club has given an earnest turn to the suggestion and probably will conduct an endurance contest for private owners only. It is to be hoped that the club will do that very thing. It is to be hoped that every other club promoting a road contest will do likewise, at least to the extent of including a class for private owners in each event. There should be a class of the sort in the Glidden tour. The private owner can be made to give an enduring complexion to such sport-can be made to make it smack more of sport and less of the "trade game." Automobile competition has been so thoroughly saturated with business interests that it is almost waterlogged from the standpoint of sport. No effort has been made to encourage the private owner. It now may prove too late, but on the principle that it is better late than never, it is well worth trying. Up to the present time, the owner has been wet-blanketed.

FRELINGHUYSEN TO CUT THE FEE

New Jersey Senator Abandons His High Tariff — Evidence that He is a "Carpet-bagger."

Senator Frelinghuysen has "come down." As a result of an informal discussion with other New Jersey senators he has advised W. C. Crosby, chairman of the New Jersey Automobile and Motor Club's legislative committee, that "the feeling is that the license fee should be raised to \$3 for cars under 10 horsepower, \$5 for from 10 to 30 horsepower, and \$10 for any above that figure, and the drivers' fee should be raised to \$2 and \$4, no tourist privilege, the manufacturers' one to five cars at \$5 per annum."

"In his new bill Frelinghuysen sought to raise the registration fees on a sliding scale -\$3 for cars of 10 horsepower or less, \$5 for cars of 20 horsepower or less, and upjumps of \$5 for each additional 10 horsepower. At present the fees are \$3 for less than 30 horsepower, and \$5 for cars of greater power. Frelinghuysen also outlined an increase in the cost of drivers' licenses from \$1 and \$2, respectively, up to \$25. He also proposed to abolish the blanket license for manufacturers and dealers which costs \$20. The extent of his "come down" is therefore of considerable magnitude. Mr. Crosby states, however, that the New Jersey automobilists are not satisfied. If any increase whatever is to be made, he thinks an increase of the speed limit or privileges to tourists or non-residents should be accorded in return.

Senator Frelinghuysen's letter to Mr. Crosby advising him of the "feeling" of his fellow senators supplies an interesting sidelight on the manner in which even New Jersey legislators transact their State affairs in New York-and without paying a fee for the privilege. Like Frelinghuysen, Crosby earns his living in New York City. Crosby, however, actually has a home in New Jersey, while the New York telephone directory gives the residential dress of Joseph S. Frelinghuysen as 35 West Sixty-eighth street. Inquiry discloses that it is the home of Senator Joseph S. Frelinghuysen-of New Jersey-the same who framed the existing law and who so stoutly insisted and insists that non-residents chiefly New Yorkers, pay an "admission fee' to enter New Jersey. Incidentally New Jerseymen, are accorded non-resident privileges in New York. For political purposes, Frelinghuysen has a letterhead which bears "Raritan, N. J." as his address. His letter to Mr. Crosby ostensibly was written and dated from that point, but for once the crafty senator missed his cue. The letter was addressed to Crosby at "755 Water street, City." If anyone asked for Water street in Raritan, N. J., he probably would cause the oldest inhabitant to scratch his head until he was freed of even suspicion of hayseed. For Water street is in New York City.

In political circles the man who resides in one State and holds political office in another State is termed a "carpet-bagger."

Asks Congress for Motor Volunteers.

The Automobile Club of Maryland is anxious not only that its own State but the Federal government recognize the automobile as an instrument for fight as already it is generally recognized as a vehicle for frolic. To that end Delegate Carr has introduced a joint recolution in the Maryland legislature calling upon Congress of the United States to adopt measures for the promotion of the use of automobiles in warfare. It was referred to the committee on Federal Relations. Later Mr. Carr offered a bill designed to permit the organization of a volunteer motor corps as a part of the State militia. In pursuance of the plan Representative Talbot of Maryland, on Monday last, offered in the House the petition from the Automobile Club of Maryland for the passage of an act by Congress creating a body to be known as "the volunteer motor corps" throughout the country as part of the regularly organized militia of the sev-

Canadian Compounds a Queer Bill.

If the bill just introduced into the Canadian parliament by Mr. Bowman should by any chance become a law, the use of automobiles will become a delightful pastime. The measure provides that no motor vehicle shall be allowed to run or stand upon any public highway in any municipality, excepting in a city, between 7 in the morning and 9 o'clock in the evening of Saturdays, and between 7 in the morning and 3 in the afternoon of Sundays. It also seeks to require that persons having control of motor vehicles when meeting a horse outside city or town limits are to stop at least 100 yards distant, and shall not proceed or allow the motor to operate until the horse or horses are safely passed.

Three More Clubs in New York.

The Peekskill Automobile Club and the Automobile Club of Ulster Co. have joined the New York State Automobile Association, making 43 clubs now on the roll. The Automobile Club of Mount Vernon, which was organized on Thursday last with William Adams as president, and F. A. Kately, secretary, also will affiliate with the A. A. A. State organization.

Can't Bar Child Drivers in Florida.

Judge Call, sitting in the Circuit Court of Florida, has declared "unreasonable and void" that part of the Jacksonville ordinance which prohibited children under 16 years from driving automobiles. The point was raised on an appeal in the case of Jack McMillan, who was convicted in a lower court.

STANDING START FOR HILL CLIMB

Plans Revised for the Fort George Contest of Carnival Week—Eleven Events on the Schedule.

Following a meeting of the hill climbing committee, Colonel K. C. Pardee, the chairman, announced a rearrangement of the classification and conditions of the Fort George hill climb to be held in conjunction with the New York Automobile Trade Carnival during the week of April 6. The climb will take place on Thursday afternoon, April 9th.

The contest will be open to stock cars under the price classification schedule of the A. A. A., and for the first time the climb will be from a standing start, in order to eliminate any possible chance of an accident such as took place at the last climb, when a car struck the subway pillar which occupies a part of the roadway near the foot of the grade and leaves but a narrow opening.

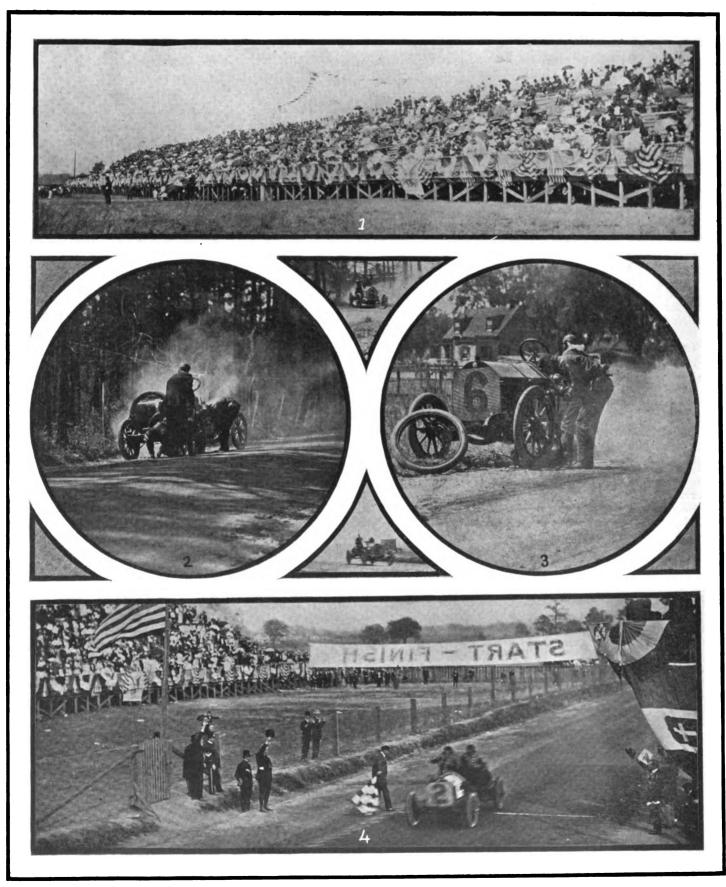
Blanks can be obtained from and entries will close with Colonel K. C. Pardee, No. 317 West Fifty-ninth street, on Monday April 6. The entry fee in each event will be \$10, or for non-subscribers to the carnival fund, \$110. Following is a list of the events:

1. Gasolene cars selling for \$850 or less.
2. Gasolene cars selling from \$850 to and including \$1,250.
3. Gasolene cars selling from \$1,251 to and including \$2,000.
4. All gasolene cars selling from \$2,000 to and including \$3,000.
5. Either steam, gasolene or electric cars selling from \$2,001 to \$3,000.
6. Gasolene cars selling from \$3,001 to and including \$4,000.
7. Gasolene four-cylinder cars selling for over \$4,000.
8. Six-cylinder cars, selling for over \$4,000.
9. Free-for-all, cars of all motive power.
10. Steam cars only.
11. Electrics of all types.

Native Cubans Try Road Racing.

Native Cubans, negroes and resident Havanians witnessed some exciting races at the Cuban capital on Thursday last, 19th inst. The race for runabouts from 25 to 50 horsepower, was won by Aspuro, who drove a Winton over the course, 2,610 metres (1. 2 miles) in 2:113/5. Damasco Laine finished first in the event for cars under 25 horsepower, his time being 2:33, while Mario Carvajal was the victor in the class for cars up to 50 horsepower. Time, 2:003/5. Honore Laine finished first in the class for touring cars between 25 and 50 horsepower, his time being 2:21. Antony Colas won a similar event for professionals in 2:15. The Havana cup was won by Alfara and the Lucha award was won by de Bustamante, who made the best time over the kilometre. Each competing car was fully equipped and carried its full complement of passengers. The events aroused considerable interest.

Scenes and Incidents; of the Savannah Stock Car Race



1. THE GRANDSTAND.

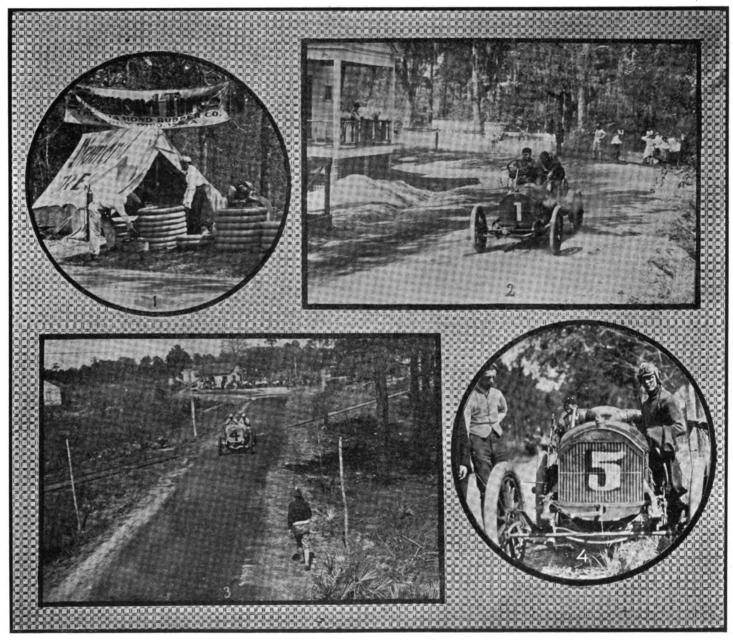
2. LYTLE PUNCTURED.

3. DITTO POOLE.

4. STRANG ACCLAIMED THE VICTOR.

SAVANNAH SETS NEW STANDARD FOR SPORT

Big Race For Stock Cars Proves That Freaks Are Not Necessary For Success—Strang Scores a Notable Victory
But Consistent Performance Is The Rule—Governor Hoke Smith Presents
The Victor—Every Detail Well Executed.



- 1. ONE OF THE DIAMOND TIRE CAMPS.
- 3. GUARDING THE COURSE.

- 2. LYTLE ROUNDING THE ISLE OF HOPE TURN.
- 4. McCULLOGH AFTER BRING DITCHED.

The balance turned at Savannah, Ga., on Thursday last, 19th inst., the second day of the two days' road race carnival for stock cars, under the auspices of the Savannah Automobile Club. The "big" race very much more than redeemed the partial fiascos of the day before.

Despite a disappointing first day, when two 180 miles races were held, in one of which but two cars finished and in the other one car, the second day brought out the first long distance road race for stock chassis held in America, and produced the finest sport ever witnessed in a long distance road race in this country. It was distinctly Vanderbiltian and a little bit more.

In a few seconds more than a quarter of a chronological day Lewis Strang jumped from the minor position of an understudy to the exalted position of one of the best race drivers in the country, by piloting a 50 horsepower Italian Isotta-Fraschini car over 20 laps of the 17.1 miles level oiled course in the fast time of 6 hours 21 minutes 30 seconds. Strang has for several years been a mechanic for and once-in-a-great-while substitute for Walter Christie. The total distance was 342 miles, making his speed average 53.83 miles an hour.

A few minutes behind Strang finished Herbert H. Lytle, well known as a Vanberbilt cup race driver, in a 50 horsepower Apperson car. Lytle's time was 6:44:37, and Malcolm Newstetter, a hitherto unknown, in a six-cylinder Acme car, finished a close third in 6:47:05. Two minutes after him came H. A. Michener, in a Lozier car, and Al Poole, known as Joe Tracy's mechanic, driving a counterpart of the winning car, was fifth. Poole made the fastest lap of the race, covering the second in 15 minutes 53 seconds, a speed better than a mile a minute. When the race officially was declared over two cars still were in the running-the Stearns, driven by Frank Leland, and the American, piloted by Fred Tone. Only one of the eight cars was put out of the running and that through no fault of its mechanism, but through an error of judgment on the part of the driver who attempted to take a dangerous turn too fast and who overturned in consequence.

The feature of the race was the remarkably consistent performance of all the competing stock cars, and the service given by the tires. The Isotta-Fraschini was fitted with Michelin and the Apperson with Diamond tires, and on neither car was it necessary to replace a tire throughout the race, something unprecedented in long distance events.

The arrangements were perfect and enthusiasm bubbled over in true Southern fashion. While it is impossible to accurately estimate the crowds that saw the race, a fair guess numbers the attendance at 50,000. The crowd was most dense, of course, at the grandstand, where 5,000 persons sat for six hours in a broiling sun, while the parking spaces held automobiles filled with persons in holiday attire. Both sides of the road were lined with spectators, two and three deep, while the Thunderbolt and the Isle of Hope turns held great crowds. Despite the crowds, not an accident happened to one of the spectators, due to the excellent military patrol in command of Major W. B. Stevens. The service of the military organizations, performed willingly without compensation, reflects the whole spirit of Savannah in regard to the meet. Seven hours' patrol duty with loaded rifles was a fatiguing task. The presence of the soldiers and naval reserves had its effect in preserving order and keeping the course clear. Only one incident is recorded where individuals attempted to cross the course in violation of orders from the patrol guards, and after one shot had been fired over the heads of the three men who disregarded the warning, and another bullet ploughed up the sand in front of them, the men quickly halted and were placed under arrest.

The course presented an animated appearance, and the presence of the picturesque Diamond tire camps around the circuit, and the directing banners indicating the turns and angles, gave it the aspect of a Vanderbilt cup course. The city of Savannah was deserted while the race was in progress. Practically all the business houses and even the schools had closed, and the only people left in town were the negro porters and bell boys in the insufficient number of ho-

Pos	s. Driver.	Car.	H.P.	Star	t. 1	2	3	4	5	6
1	Lewis Strang	Isotta-Fraschini	50	2	17:50	17:16	1:11	18:10	17:40	18:42
2	Herbert Lytle	Apperson	50	1	18:35	18:44	1:56	28:27	19:33	19:27
3	Malcolm Newstetter	Acme	50	8	19:56	19:18	1:30	19:39	19:42	21:37
4	H. A. Michener	Lozier	45	4	18:41	18:27	18 :32	18:32	18:40	18:36
5	Al. Poole	Isotta-Fraschini	50	6	18:53	15:53	1 :პა	18:35	18:49	18:17
	Fred Tone	American	50	3	27:51	19:08	19 :16	41:01	29:23	39 :13
	Frank Leland							19:05	22:11	28:17
	William McCullogh.	Apperson	50	5	19.52	39.08	*			

* McCullogh overturned at Isle of Hope turn.

† Leland and Tone were still running when the race officially was declared over. Tone's total ti

tels, a few policemen, firemen and street car conductors. Every other Savannahian was somewhere on the course.

Although Georgia is a prohibition State it did not follow that all of the spectators went dry. Most of the hampers carried in the automobiles contained "ginger ale," which is known in Georgia as "prohibition beer," or something stronger, while it is even recorded that several automobiles carried on a thriving trade as itinerant bars. The presence of Governor Hoke Smith, Mayor Tiedeman of Savannah, and other State and municipal dignitaries did not apparently curtail the brisk trade.



ONE OF THE SUPPLY STATIONS

Three hours before the race started the crowd began to fill grandstand, parking places and other points of vantage and when Lytle, in the Apperson, got the word at 10 o'clock, the grandstand occupants rose to their feet and gave him a cheer. Lytle got away without incident and was soon lost to sight up the oiled White Bluff road. Ninety seconds later Strang, in the Italian car, took the signal, and the others got away at the same intervals. Fred Tone, in the American, was third, and Michener, in the gray painted Lozier, which had been dubbed King Cotton, breasted the tape next. Clad entirely in white, while from the tops of their tightly fitting headgear defiantly floated white streamers, Michener and his mecanicien presented a striking picture as they awaited the signal. The "King Cotton" lost several seconds at the tape. William McCullogh, in the ill-fated Apperson was fifth away, and then followed Al Poole, in the other Italian car; Poole was the favorite. Frank Leland, driving the Stearns car, the only machine entered by a Savannahian, was seventh, and Newstetter, the dark horse, in the Acme "six" started last.

The first news received by telephone at

the stand came a few minutes after Newstetter left. It was to the effect that the American car had shed a tire on the first turn. Strang passed Lytle on the first lap and led at the end of the first 17.2 miles, covered in 17 minutes 50 seconds, with Lytle second in 18:35. The second round passed with Strang still in the lead and opening a gap on Lytle, while Poole, Strang's team mate, simply burned up the roads and almost overhauled McCullogh, who had left before him. Poole's fast driving in this lap scored for him the fastest lap in the race, the 17.1 miles circuit being covered in 15:53.

It was in the third lap that McCullogh came to grief. He attempted to pass Poole on the sharp left handed turn after leaving the Isle of Hope, and took it too fast. Neither the driver nor Wray, his mechanic, was injured when the car overturned, but the steering wheel was broken, and that put it out of the running, although later a temporary repair was made and the car returned to Savannah under its own power.

Poole had hard luck. After being in the lead for a part of the time and holding second place from the tenth to the fourteenth laps, he was compelled to drop back to fifth position on account of tire and other troubles. Lytle also had some trouble with a broken oil pipe. He dropped from second position to fifth and it was not until after the tenth lap that he got actually in the running again. When he did, Lytle made the most remarkable run of the race. Hard luck spoiled the chances of the American and the Stearns cars early in the race. The former cast a shoe after being in the race less than six minutes. Another followed at the Isle of Hope and a third at the turn into the homestretch in the next round. An oil flooded clutch also added to Tone's discomfiture, while Leland was beset by a series of mishaps. He drove by the stand twice with one tire missing, and in the seventh lap ran through a barbed wire fence. He lost much valuable time each lap in plugging up the leak in the radiator caused by the sharp barbs.

The run of Michener's Lozier for the first eight laps is worthy of note, as it reeled off lap after lap with a maximum variation of only 19 seconds, while two circuits, the third and fourth laps, were made in exactly the same time to the second. The performance was again repeated in the 12th and 13th laps.

E	WA	2	R	Ħ	N	AND	WON.

	TIME EACH LAP												Total	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	Time.
25	22:17	18:02	18:02	18:12	18:08	23:31		19:02	18:40	18:37	22:19	20:57	19:07	6:21:30
28	19:01	22:53		19:46								18:33	18:17	6:44:37
29	24:33	19:17	22:07	19:23	23:35	19:41			21:39					6:47:05
58	18:07	19.48	26:31	37:12	19:09	19:09		18:51		23:07	22:49	23:53	18:57	6:49:17
58	18:07	17:39	20:20	19:36	18:32	17:31	26:41	19:34	19:31	42:40	28:00	16:46	17:33	6:58:53
33	20:52	25:12	34:14	21:09	21:42	26:40	21:20	21:25	†					
27	47:07	22:23	47:10	22:20	27:02	22:23	22:42	22:51	İ					

for 15 laps was 6:36:30, and Leland's 6:45:24.

Trailed by the Lozier and by his own team mate, Strang began to pull away and kept his lead through the seventh lap, only to drop it to Michener in the next. In the 9th lap, however, Strang made a fast spurt and again regained the lead, which he retained from then until the finish.

At the end of the 10th lap, with the race

in the 17th lap when Lytle passed Poole after a neck and neck dash past the tape.

When it became known that Strang practically had won the race he slowed down in the last three laps. On the last lap he came down the homestretch between two lines of cheers, smiling and with one hand in the air. Lytle followed and was greeted

more pleased when the Governor himself pinned upon his coat a gold medal at the veritable love feast which followed in the evening.

At the shore dinner given by the local club in the evening a lot was said about Savannah's chance for landing the next Vanderbilt cup race, and even Jefferson De Mont Thompson, chairman of the cup commission, who refereed, said that next to his own State (New York) he was in favor of Savannah. Medals also were presented to Lytle, who won the runabout race on Wednesday in an Apperson car and to Salzman (Thomas-Detroit) the only finisher in the stock car race, on Wednesday. The supper was the occasion for felicitation on all sides, and the guests passed a resolution thanking the American Automobile Association for its service, the manufacturers, photographers, newspaper men and



GOV. HOKE SMITH DELIVERING HIS ADDRESS; STRANG ON HIS RIGHT

half over, Strang led Poole by 7 minutes, with Michener three minutes behind. Newstetter was fourth, Lytle fifth and Leland sixth. Tone was last. It was at this point that Lytle began his remarkable run that landed him ultimately in second place. With the exception of the 16th lap not one of the succeeding rounds was covered in more than twenty minutes. Poole had carburetter trouble in the 11th lap. In the 18th lap Strang came up to Poole and seeing him under the machine, slowed up to ask the trouble.

"Never mind me," yelled Poole. "Go on; you've got the race won!"

While Poole dropped back Lytle climbed steadily forward. His heady driving in the closing laps of the race manifested itself to the spectators. In the 15th lap he passed Tone after an exciting brush past the grand-stand which brought the crowd to its feet, and a few minutes later overhauled Poole. The crowd in the stands got another thrill

even more tumultuously than was Strang. The most spectacular finish was made by Newstetter in the Acme, when he dashed down the last stretch at a speed of 75 miles an hour, after a great run in which he snatched third place from Michener. After Poole had finished, the race was declared over.

Possibly it was the proudest moment in Lewis Strang's life when, after winning the race and a leg on the \$3,000 challenge trophy that went with the victory, Governor Hoke Smith presented him and his mechanic to the grandstand audience. After complimenting the management of the race and commenting upon the great sport the Governor said:

"While it was a foreign car that won this race it had to be driven by an American citizen to win. We appreciate superb machinery, but we place manhood first of all." Strang smiled when the Governor presented him as the "hero of the day," and seemed

everybody else. The only dry feature of the supper was that the menu "suffered" considerably on account of Georgia being a prohibition State. Even this harshness was softened somewhat by referring to cocktails as "your choice of soft drinks," and substituting "prohibition beer" (ginger ale) instead of wine, while rye (bread) and soda (crackers) took the place of the genuine articles. "Black coffee for sobering" and "Sham pain on Ice (water), topped off the menu, with a satirical "Too bad—isn't it," as a final flourish.

Although no official figures have yet been given out, it is thought that the two days' meet will be an "even break," so far as finances are concerned. Including the building of the big grandstand, parking stalls, fences, and so forth, and oiling the race course, the meet cost the Savannah executive committee approximately \$15,000. It is thought that the receipts will about meet this expense.

CANADA FLOCKS TO TORONTO SHOW

Many Cars Staged and Leading American Makers Among the Exhibitors—Railroads Display Active Interest.

With a total of 66 exhibitors, more than half of whom display cars, Canada's annual automobile, motor boat and sportsmen's show opened in the St. Lawrence arena, Toronto, Saturday night last, 21st inst. This year's exhibition is attracting more notice than former shows as the various railroads are taking an active interest to the extent of exhibiting and offering single rates from all parts of Ontario to Toronto. Because of the railroad excursion rates many visitors from outside points have been attracted to the show, more than five hundred certificates having been presented for redemption the first day. The show is held under the auspices of the Ontario Motor League, which has a membership upwards of 400. Among the exhibitors are:

Ford Motor Co., Automobile & Supply Co., Dominion Automobile Co., Oldsmobile Co. of Canada, Canada Cycle & Motor Co., Hyslop Bros., Ltd., McLaughlin Motor Car Co., George N. Pierce & Co., Pickard Motor Car Co., Maxwell-Briscoe Motor Co., Cadillac Motor Car Co., Mitchell Motor Car Co., Stevens-Durvea Co., Dayton Motor Car Co., Darracq Motor Co., Studebaker Bros. Co. of New York, Renault Freres, Napier S. F. Edge, Ltd., Ferro Machine & Foundry Co., S. F. Bowser & Co., Diamond Rubber Co., Dunlop Tire & Rubber Goods Co., Canadian Puncture Proof Tire Co., George A. Haw, Premier Motor Co., Randall-Faichney Co., Auto Igniter Co., Roberts Motor Co., International Carriage Co., Motz Tire Co., Reo Motor Car Co., Comet Motor Car Co., Winton Motor Carriage Co., Kissel Motor Car Co., Premier Motor Mfg. Co., and Royal Motor Car Co.

Debut of Native Car at Omaha.

The third annual show of the Omaha Automobile Association, held in the Auditorium, Omaha, Thursday, Friday and Saturday last, 19th, 20th and 21st insts., brought out one new car, the only one manufactured in Nebraska. The Fuller, as it is called, is a four-cylinder water cooled machine, employing friction transmission and shaft drive, and is made by the Angus Automobile Co. of Angus, Neb. The other cars on exhibition are: Franklin, Pilain, Delahaye, Moline, Columbus, Buick, Reo, Holsman, Oldsmobile, Maxwell, Stanley, Stevens-Duryea, Babcock Oakland White, Stoddard-Dayton, Ford, Pope-Hartford and Jackson.

Fresno "Society" at Dealers' Show.

For a town with so few dealers and by the same token a limited number of agencies, the first show held by the six dealers

THE MOTOR WORLD

of Fresno, Cal., March 12, 13 and 14, was an ambitious effort. In all there are eight dealers in the inland town, but as only members of the newly organized Fresno Automobile Dealers' Association were allowed to exhibit, the show was limited to six exhibitors of cars. The opening night was termed "Society Night," when the dealers charged one dollar admission and 'got away with it," too. The cars shonw were: White, Maxwell, Oldsmobile, Buick, Pierce-Arrow, Tourist, Mitchell, Elmore, Locomobile, Ford, Reo, Rambler.

New Haven Show Well Attended.

Despite stormy weather the annual show of the New Haven (Conn.) Automobile Dealers' Association opened in Music Hall that city Wednesday night last, 18th inst., with a large crowd in attendance. The show continued all week, one day's receipts being given to the poor of the city. The hall was tastefully decorated with flags, bunting and potted plants, more than 150 of the last named being distributed about the room. Neither the Maxwell nor the Stoddard-Dayton cars were shown, as Harry B. Tuttle, the local agent, could not secure sufficient space. In consequence he rented two stores on the main floor of a building a few doors west of Music Hall where he held open house all week. The cars shown in Music Hall were: Locomobile, Apperson, Clement-Bayard, Pope-Waverly, Franklin, Stevens-Duryea, Buick, Babcock, Studebaker, Cadillac, Oldsmobile, Reo, White, Corbin, Thomas, Atlas Compound Schaet and Pope-Toledo.

Utica Man Wins Franklin's Prize.

The solid gold 21 jewel watch offered by the H. H. Franklin Mfg. Co., as a prize for the Franklin agent who submitted the best ten reasons why an automobile buyer should select the Franklin, has just been awarded to Irving R. Gardinier, superintendent of the automobile department of C. H. Child & Co., Utica, N. Y.

The contest lasted for four weeks, 57 contestants taking part. Their ten reasons varied in length from 10 words to 2,500 words. All were carefully examined by a committee consisting of H. H. Franklin, president of the company; John Wilkinson, chief engineer, and F. R. Bump, sales manager.

Thomas on Taxicab Mission to Pacific.

E. L. Thomas, of the E. R. Thomas Motor Co., is on the Pacific coast chiefly on taxicab business. It is stated that he had organized a cab service in San Francisco and that a similar project is under way in Los Angeles.

Automobile Show for Salt Lake City.

Salt Lake City is to have an automobile show in Auditorium roller skating rink in that city. It will open on March 31 and continue through the week, closing April 4.

WALKER WESTON AT ROCHESTER

Aged Pedestrian an Exhibit of Great Interest at Local Show—The Cars that Were in Evidence.

With Edward Payson Weston, the venerable pedestrian, who surprised the world by walking from Boston to Chicago some time ago in record-breaking time, is the feature exhibit the Rochester Automobile Club held its first annual show in Convention Hall, Rochester, N. Y., Wednesday, Thursday, Friday and Saturday of last week, March 18th to 25th inclusive. None of the crudity usually attendant to first attempts was manifested at the Rochester club's exhibition. The electrical display was well worked out. Because of the limited floor area the placing of the exhibits on the ground floor necessitated a systematic arrangement. In the center of the hall was a large rectangle, with an aisle for spectators around each of its four sides, and another bisecting it at right angles. Through the center of the rectangle was a line of white Corinthian columns with an arch surmounting the dividing aisle. Each of the columns had at its top a cluster of electric bulbs, while wires of suspended bulbs ran diagonally from the center to the corners. Green and white, the club's colors, were displayed lavishly, but in pleasing harmony. Weston, the pedestrian, was the feature of the Gearless exhibit, a car of this make having accompanied him on a part of his long march to Chicago last year. Among the cars displayed were the following:

Gearless, Thomas Flyer, Thomas-Detroit, Columbia, Elmore, Packard, Jackson, Mitchell, Maxwell, Stoddard-Dayton, Pierce-Arrow, Stevens-Duryea, Locomobile, Selden, Pope-Waverly, National, Earl, Jewel, Buick, Peerless, Corbin, Aerocar, American, R. & L., Lambert, and Holsman.

Another Car for Street Cleaners.

The Department of Street Cleaning of New York has obtained permission from the Board of Aldermen to purchase, without public letting, an automobile to cost not over \$3,500. Last December, Dr. Bensel. at that time street cleaning commissioner. notified the sinking fund commissioners that the department had more automobiles that were required for its needs; the result was that a Lozier touring car was transferred from the street cleaning to the health department. Now, however, that the snow has gone and the pleasant days and evenings of summer are approaching, the need of another car is sadly felt, so the Lozier company have been directed to furnish another of their touring cars. The car to be furnished has been carefully and particularly selected, and according to some reports is likely to prove an object of considerable interest.

AMERICAN ENTRY REACHES 'FRISCO

Thomas Car Completes First Leg of New York-Paris "Race" in 42 Days—Foreign Contenders Still Tinkering.

With Harold Brinker at the wheel, the Thomas car, the only American entry in the New York-Paris "race," rolled into San Francisco on Tuesday last, 24th inst., and it is expected that it will be shipped by boat to Alaska to-morrow or the next day. The voyage across the American continent had occupied 42 days. The "race" started from 'New York, February 12. and while it has proven rather amusing as a race, it has been

tackle and brawn to extricate it. The total delay amounted to some 40 hours. Immediately afterward, the party experienced a bitter disappointment in the refusal of the railroad officials to grant the Italians the use of the Aspen tunnel, and the right of way over the Piedmont Mountains, which has been permitted the Thomas. An attempt was made to construe this into an affair of international importance. But upon the explanation of the officials that the passage of the American car had so cut up the ballast that it had been necessary to go over it completely in order to put the road into serviceable condition once more, the matter was allowed to pass under protest. The services of the obliging railroad company were again called into requisition on spoiled the Franco-German speed contest which had been anticipated. Laramie, Wyo., was reached on Sunday evening after a strenuous run of 57 miles. The car is now reported to be within 100 miles of the De Dion, at Green River, Wyo.

Clubs Choose New Officers.

The following officers were elected at the annual meeting of the Norristown (Pa.) Automobile Club: President, John E. Mountain; vice-president, B. Frank Stritzinger; secretary, Edwin S. Nice; treasurer, Louis E. Taubel; directors, F. M. Jacquith, R. A. Jackson, Harry A. Wlison, and F. B. Wildman

Dr. S. T. Davis was re-elected president of the Lancaster (Pa.) Automobile Club at



THOMAS CAR WITH BRINKER AT WHEEL BUMPING OVER THE TIES IN UTAH

a strenuous struggle that has tested both men and machines. Of the six starters, two quit—the Sizarre-Naudin, which lasted only 96 miles, and the Motobloc, which was entrained at Omaha.

An accident, variously reported as affecting the differential, the steering gear and the driving gear, had delayed the Thomas at Stone Cabin, between Ely and Goldfield, Neb., on Thursday. Extra parts had to be brought out from Tonopah, 57 miles distant, and the incident delayed Goldfield's celebration of the arrival of the only American contestant. By Saturday, Beatty, Nev., was reached, when, instead of taking the proposed route over the Santa Fe and San Pedro lines, Brinker followed the shorter and more mountainous route to Mojave, Cal., and so to Bakersfield, which was reached after forced runs, day and night, on Sunday. Fresno was left behind on Monday, and the 100 mile run into San Francisco accomplished the following day without incident.

A mud hole west of Church Bluffs, Wy., held the Zust car in its clutches all of Thursday night, and until a Union Pacific work train had been side tracked on Friday, long enough for its crew to lend sufficient

Monday, however, when, only a few miles beyond Kelton, Utah, the car came to grief, and returned to face a long delay. In this emergency, a special train was supplied to take the car back to Ogden, where the U. P. shops were thrown open to it for the third time. It was re-shipped to Kelton, and again took the road Wednesday afternoon.

Undergoing the usual difficulties, the De Dion car got as far as Rock Springs, Wyo., on Monday, and there became mired outside the town. In warping it out of its berth, something went wrong with the tackle, and St. Chaffrey's right hand was injured. Press despatches under his own signature later stated that the hurt was so great as to impair his driving ability, and that he would probably be forced to give over the management of the expedition to Autran, so soon as San Francisco is reached.

Thursday of last week, the Protos car came near overtaking the De Dion at Lexington, Neb., which was reached only about four hours after the departure of the French entry. A delay pending the arrival of some much-needed tires, which had been sent to Seattle for Alaskan duty, but re-requisitioned for service in the States, however,

the annual meeting last wek. The other officers elected were: Vice-president, Martin Kinports, Ephrata; treasurer, Dr. P. P. Breneman, Lancaster; secretary, J. D. Rider, Lancaster; directors, H. M. Hillegas, Columbia; Dr. J. F. Trexler, Lancaster, and H. C. Shock, Mount Joy.

The Automobile Club of Cincinnati has elected the following officers for the ensuing year; President, Dr. C. L. Bonifield; first vice-president, C. Gordon Neff; second Jr., C. E. Bultman, Paul Cerkamp, Dr. A. Dr. L. S. Colter; treasurer, Harry L. Manss; consulting engineer, E. J. Carpenter; board of governors, G. W. Drach, Val Dittenhofer, Jr., C. E. Bultman, Paul Verkamp, Dr. A. B. Heyl and Louis Merkle. The club has a membership of 242.

Will Again Climb Sport Hill.

The Automobile Club of Bridgeport, Conn., will, as usual, hold its annual hill climbing contest on Memorial Day. This announcement was made last week after a conference with the selectmen of Easton, who agreed to allow the club the use of Sport Hill at that place on the morning of May 30th. Rules and classes will be announced later.

KING CARNIVAL AT INDIANAPOLIS

Dealers Hold Open House for the Week— Exciting Hill Climb Held and Big Parade to Come.

Indianapolis's seventeen agencies and nine manufacturers are this week holding an open house show or "spring opening," as they term it. The carnival week should have opened on Monday, 23d inst., with a decorated parade, but because the weather forecaster prophesied rain it was postponed until Wednesday, though not until 50,000 persons had congregated in the downtown district to witness the spectacle. The services of the weather forecaster will be dispensed with in the future because it did not rain. All the agencies along Indianapolis's "row" are tastefully decorated.

The feature on Tuesday was a big hill climb held up the sharp incline known as Michigan hill, northwest of the city. Thousands of spectators lined the course, which is exactly four-tenths of a mile long, and some exciting sport was their reward. Howard Hodson, driving a Stoddard-Dayton car won three of the five events, and in the class for cars listing between \$2,750 and \$3.500, made the fastest time of the day, 372/5 seconds. C. P. Brockaway, driving an Overland, a locally-made car, was the victor in the class between \$1,000 and \$1,800, and W. B. Peterson, Buick, made the fastest time in the event for cars listing under \$1,000. The feature was the small difference in times made by all the competing cars in each event, as shown in the following summaries:

Cars listing at \$1,000 and under—Won by W. B. Peterson, Buick, 0:483/5; second, Frank Menthorn, Ford, 0:56; third, O. G. Mayers, Reo, 1:033/5; fourth, Bert Corbet, Maxwell, 1:033/5; fifth, D. B. Sullivan, Lambert, 1:241/5.

Cars listing from \$1,000 to \$1,800—Won by C. P. Brockaway, Overland, 0:503/5; second, Guy Simonds, Stoddard-Dayton, 0:513/5; third. Harry Knight, Buick, 0:55; fourth, C. E. Gibson, Ford, 0:56; fifth, W. W. Beeson, Auburn, and O. G. Mayers, Reo, tied in 0:571/5; sixth Adams, Great Western, 0:58; seventh, Ferguson, Buick, 0:581/5; eighth, P. L. Crighton, Great Western, 1:013/5; ninth, F. M. Martindale, Leader, 1:061/5; tenth, J. W. Lambert, Lambert, 1:101/5.

Cars listing from \$1,000 to \$2,750—Won by H. Hodson, Stoddard-Dayton. 0:38\\frac{1}{2}; second, L. E. Finch, Thomas, 0:40\\frac{1}{2}; third, L. Markle, Oldsmobile, 0:44\\frac{1}{2}; fourth, Frank Nutt, Haynes, 0:45\\frac{1}{2}; fifth, Harry Knight, Buick, 0:46\\frac{1}{2}; sixth, Frank Nutt, Haynes, 0:47\\frac{1}{2}; seventh, A. W. Moore, Premier, 0:48\\frac{1}{2}; eighth, F. Eisle, Oldsmobile, 0:51\\frac{1}{2}; ninth, Miloch, Cadillac, 0:54\\frac{1}{2}; tenth, H. S. Wilcox, Autocar, 0:55; eleventh, R. L. Sutherland, Cylde, 0:58\\\frac{1}{2}.

Cars listing from \$2.750 to \$3,500—Won by Howard Hodson, Stoddard-Dayton, 0:37%; second, L. E. Finch, Thomas, 0:40%; and Harry Hammond, Premier, tied; third, L. Markle, Oldsmobile, 0:40; fourth, Ray Tinkle, Marmon, 0:47; fifth, C. W. Enzland, Marmon, 0:48%; sixth, H. S. Wilcox, Autocar, 0:52%.

Cars listing at \$3,500 and over—Won by H. Hodson, Stoddard-Dayton, 0:39; second, Thomas Kincaid, National, 0:3936; third, L. E. Finch, Thomas, 0:4136; fourth, J. Aitken; National, 0:42; fifth, Frank Clements, National, 0:44; sixth, G. W. Enzland, Marmon, 0:4736.

Motoring Sensations in Fiction.

There is a vast difference in point of view, both optical and mental, between the corner seat in the tonneau and the post of honor and responsibility behind the steering column. That is why the motorist is so frequently separated from his guest by a great wall of fear, which, in a measure, is only a barrier of experience. Difficult as it may be for the passenger to realize that his dread of some dire calamity is but a condition of mind, however, it is even more difficult for the driver to appreciate the attitude which induces this condition in one who is not accustomed to the sensations of motoring at high speed.

In "My Enemy the Motor," published by John Lane Co., New York, Julian Street presents the sensations of a direct drive initiation into an automobile existance That the picture is most vividly. humorous as well, is to be expected in the nature of things. It is a tale of a proposed tour in southern Europe, which Fate intervened to prevent. Not much as a tale, perhaps, but more as a picture, and very good as a study in mental attitude. The characterizations are terse and pointed; the descriptions take a firm hold on the nervous system of even the hardened driver; and the narrative moves as rapidly to its climax as does the exploit which it relates. The fact that it once appeared in magazine form does not detract from its amusing and entertaining quality, which makes up in tone for what the book lacks in number of words.

Milwaukee Referee Upholds a Protest.

The protest of the Cleveland Motor Car Co. against the penalization of 2680 points charged against the Continental-tired Cleveland in the Milwaukee three days reliability contest has been allowed by the referee. This decision reduces the penalty to 1430 points, and gives the car first place in Class A, for cars selling for \$3,000 and over. The protest arose over a difference in the time consumed in replacing a broken front spring.

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

OLD BUCKMOBILE CASE REVIVED

Seaton Secures Affirmation of His Judgment Against the Late Dr. Brower— Echo of a Memorable Run.

Like an echo out of a long forgotten past was the decision handed down by the Appellate Division of the Supreme Court in Rochester, N. Y., in the case of Albert J. Seaton, respondent, versus Abram G. Brower, appellant. The decision was an order denying the motion to strike out interest reversed without costs. The judgment was modified by striking therefrom the amount of interest allowed, and as so modified affirmed, together with the new order denying motion for new trial, without costs of the appeal to either party.

The case was one which aroused considerable interest at the time of trial, as it had some bearing on the workings of the old Buckmobile Co. The first trial was held before County Judge Pritchard and a jury and was opened April 22d, 1907. Two days were consumed in the trial. The case was given to the jury, which returned a sealed verdict, awarding the plaintiff \$1,000.

In opening the case it was shown that Brower was president of the Buckmobile Co., and afterwards, in April, 1904, when it was taken over by the now defunct Black Diamond Automobile company, a larger corporation, he also became president of that company. The case hinged on the memorable run from New York to St. Louis.

Seaton, then in the employ of the automobile company, was chosen to pilot a car in the run, but he at first refused to go as the Black Diamond company owed him a considerable sum of money. The evidence showed that Brower prevailed upon Seaton to make the run, pointing out that a successful journey would mean much to the company, as it would enable it to sell its stock more readily. Seaton claimed he was promised \$1,000 to make the trip.

When the plaintiff rested, the lawyer for the defense said that Seaton had invented the buckmobile, "an outlandish looking machine on a buckboard," organized a company and got Brower and another into it. After speaking of the merger with the Black Diamond company the lawyer for the defense characterized Seaton as an "auto crank who would not have missed the St. Louis run for all the stock in both companies."

The evidence was very contradictory. Judge Pritchard, in charging the jury said the only thing for them to determine was whether Dr. Brower agreed to pay Seaton \$1,000 for making the trip. There was no question as to the amount and the verdict should be either no cause for action or \$1,000 for the plaintiff, and the latter alternative was taken by the jury.

Since the trial Dr. Brower died, and the claim is now against the estate.

BESNARD SYSTEM IN SOLAR LAMPS

Details of the Method for Eclipsing Headlight Glare—Division of the Rays into Two Groups.

Of the several ways by which it is possible to check the illumination of the acetylene headlight in order to prevent the unpleasant and even dangerous effects of its blinding glare upon opposing traffic, the most simple and obvious possess the disadvantage of temporarily impairing the usefulness of the lamp. In the Besnard system, the American rights to which recently

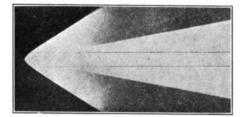
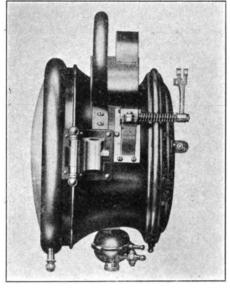


Fig. 1

were secured by the Badger Brass Mfg. Co., Kenosha, Wis., and applied in somewhat modified form to the Autoclipse and Solar-clipse lamps, this advantage is developed, that the throttling of the penetrating and dazzling beam of light which is reckoned the undesirable feature of all lamps of the plain searchlight type, does not in the least affect the illuminating power of the lamp within the restricted field immediately in front of the car. The very evident advantage is that the driver of the car, while enabled to protect other users of the road from the confusing effects of the long dis-

beam, focused for either very long or very short projection, is divided into two independent beams. The first is intended solely for illuminating the immediate foreground, and is a wide-angle distribution of a portion of the light emanating from the flame. The second comprises a highly concentrated beam, thrown directly through the other and projected to a great distance for



THE SOLARCLIPSE LAMP

the purpose of illuminating the road at a considerable distance from the car. The effect is thus practically that of two lamps, one for long distance and the other for short distance illumination. The way in which the light is distributed is made clear by the Solar people in their catalog just issued, which renders possible a better understanding of the Besnard system.

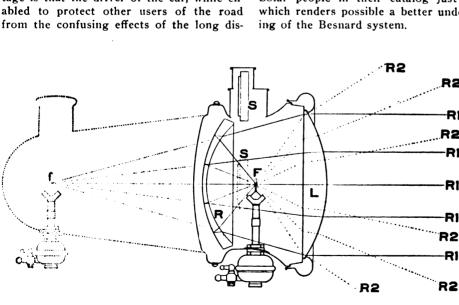


Fig. 2

tance rays of light, is still enabled to guide his car intelligently, since the road immediately before him is brilliantly illuminated.

In order to accomplish this very desirable effect, the light thrown from the lamp, instead of being concentrated in a single

The manner in which the light is distributed is shown by Fig. 1. In Fig. 2 the principle of the system is illustrated. The rays emanating from the front of the flame, F. are caught by the plano-convex lens, L, and distributed over the wide field directly

before the car, as shown by the rays, R2, but without developing any of the blinding effect which is the unpleasant feature of the average searchlight. These rays are permanent, and constitute the broad and mild beam shown in Fig. 1. The rays from the back side of the flame, F, are reflected from the hyperbolic mirror, R, back to the lens to form the concentrated long-distance beam of light, R1, shown in the center of Fig. 1, as covering the wheel tracks indicated by the two parallel lines in the center of the picture.

Without the special combination of hyperbolic reflector and lens which is known technically as a "hyperlenticular" combina-

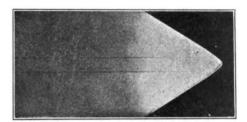
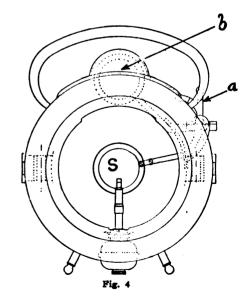


Fig. 3

tion, a much greater depth of lamp would be required in order to secure an adequate focal distance between flame and lens. How long a lamp would otherwise be required to secure the same projection of the long distance beam, is shown in Fig. 2, by the dotted lines and the indicated position of the equivalent flame at f.

The difference between the Autoclipse and Solarclipse lamps develops in connection with the reflection and refraction of the long distance beam, as it has been called. In the Autoclipse lamps, the French method of construction is employed, the reflector,



R, comprising merely a shallow metalic mirror, which is purely a reflector. In the Solarclipse lamps, on the other hand, a special form of lens mirror reflector is employed which performs the double function of reflection and refraction, thereby devel-



oping a higher degree of efficiency in handling the light, and also possessing certain mechanical advantages not to be found in the plain reflector, such as the very important non-corrosive property of the lens mirror.

Once the method of distributing the light is understood, the way in which the eclipsing of the long distance rays is brought about is easy to comprehend. All that is required is to interpose an opaque shutter between the back side of the flame and the mirror in order to eliminate the rays which are, for the moment, undesirable. To this end, the small shutter, S, Fig. 2, is brought down from its normal position in the heat hood to the position shown by the dotted lines. The resulting effect is shown in Fig. 3, where the light from the front of the flame only, is seen to be distributed through a very wide range, but with sufficient diffusion to dispel any blinding glare. The power of the flame, so employed, is sufficient to illuminate the road distinctly to a distance of 35 yards from the lamp, giving a clear view of the road, sufficient for running at low and moderate speeds with perfect safety. With the shutter raised to its normal position, on the other hand, the central beam is carried to a distance of 320 yards, developing the bright, white spot in the road, which is essential for ordinary running at night.

The mechinical construction of the lamp is further brought out by the front view shown in Fig. 4, in which the eclipsing effect is shown where the shutter is dropped into the position shown at S. Ordinarily. a spring suffices to hold it in the position, b, in the heat hood, from which it is displaced when desired, by means of the small lever, a, which is worked by a Bowden wire from the driver's seat. By a special method of connection, both headlights are manipulated by a single control wire, and in unison. The arrangement of the external lever and spring are shown in the side view of the complete lamp, which also emphasizes the compact construction which is brought about through the use of the hyperbolic mirror.

Little Clips that Require Care.

It is essential that the little clips which are so frequently employed to bind together the outer leaves of the ordinary elliptical springs, be held firmly in position, and that in the event of their being broken or lost, they be replaced immediately. If this is not done, the stress, when the spring is subjected to a heavy rebounding action, is brought almost wholly on the inside leaf, and unless more than strong enough for its ordinary work, there is great danger of its being broken.

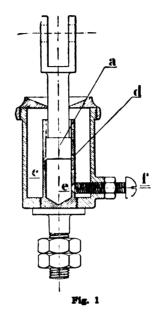
"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

THE MOTOR WORLD

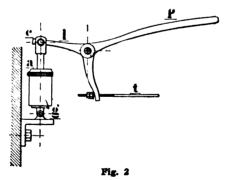
EASING THE CLUTCH ENGAGEMENT

Application of Suction Dashpot for Checking Motion—Progressive Action in Picking up the Load.

While there are certain drawbacks to every form of friction clutch which has yet been put upon the market, or used in connection with the motor car transmission, it is undoubtedly the case that the moving cause in nearly all improvements which



have been made, as well as in the development of the newer types which have in some measure replaced the old leather-faced cone type, has been the difficulty of obtaining a smooth engagement when picking up the load from rest. Skilful drivers never have



been wont to complain of the performance of the cone clutch in this respect, nor have they habitually failed to obtain good running results with it. Hence it would appear that in many respects, some device calculated to ensure the same method of engagement as is used by the skilled driver as a result of this training, would go a long way toward solving the problem of successful clutching of the load, regardless of the type of clutch employed.

One of the most obvious expedients which could possibly be employed in this connection is the use of the plain suction dashpot for checking the motion of engagement, and ensuring its progression at a stated rate. Such a system has been developed recently by the firm of Outhenin Chalandre, Neuilly-sur-Seine, France. It comprises nothing more nor less than a small attachment which may be connected to almost any form of clutch, and which serves merely to check the rate of engagement according to the adjustment of the escape valve upon which its action depends.

As shown sectionally in the accompanying Fig. 1, it will be seen that the device consists principally of a small cup or shell. fitted with a screw top and containing a small cylinder mounted centrally within it in such a way as to leave an annular space within the outer shell. The plunger, a, is connected by means of the clevis on its stem with some movable portion of the clutch actuating mechanism, while the shell is attached permanently to the frame of the car. A small orifice part way up in the side of the inner cylinder, shown at d, permits a certain amount of the fluid contained in the device to circulate as the plunger moves up and down, until the latter closes the opening. Thereafter the flow between the cylinder and the outer space, c, must take place through the small hole, e, which is regulated in area by means of the screw, f, and its lock nut.

Attached to a clutch of the familiar Panhard type, the arrangement is as shown in Fig. 2, P, being the piano-type of pedal, t, the actuating arm connected to the drag rod which disengages the clutch, and l, the braking arm, to which the shock absorber, or clutch regulator. a, is attached by means of its plunger, at e. The shell of the device, g, is mounted on the dashboard of the car, as shown, and is articulated to provide for a certain amount of radial movement.

When the clutch is to be engaged, instead of releasing the pedal gradually, as must be done ordinarily, the operator merely lifts his toe entirely clear of the pedal. when the spring is permitted to draw in the clutch until the small orifice in the cylinder of the device has been passed by the plunger, when the resistance to its motion becomes sufficiently great to slow it down to the desired rate. Thereafter, the engagement proceeds at a controlled speed and is rapid or slow, according to the adjustment of the regulating screw. The action is precisely the same as is employed in the ordinary form of hydraulic door check. The acceleration of the car is thus regulated to a uniform degree, and all starting jolts and shocks eliminated.

To Guard Against Short Circuits.

The length of a battery's life depends on how much current is taken from it. A short-circuit will quickly kill even a new cell. It is important, therefore, that in connecting up batteries or in putting them on a machine, care be taken not to let any metal parts touch the binding posts of the cells.



COMMERCIAL VEHICLE PROBLEMS

Limitation of Permissible Axle Load—How Met in Four Wheel Drive and Multiple Unit Trains.

What is admittedly the principal limitation of the commercial motor vehicle results from the double consideration of the unsatisfactory state of the tire problem, and the inability of the average highway to withstand the concentrated pressure of very heavy loads. Thoroughly successful commercial vehicle design, therefore, must be carried out with definite regard to a certain limiting permissible axle load. How this factor affects the transportation of very heavy loads, and how it is likely to work out in the development of motor haulage on a large scale, is considered by Joseph A. Anglada in a paper read before the Society of Automobile Engineers.

"Within the past few years it has been proven by users in general that, aside from the advertising value of commercial automobiles, which exists in few cases at present, the employment of auto-trucks of over 6,000 pounds load capacity is not as profitable as the employment of smaller vehicles," remarks the authority in question. "The rapid depreciation of the rubber tires in general use, and of the power generating apparatus, necessitating frequent repairs and replacements, are the chief reasons for the above state of affairs.

"A few vehicle manufacturers and users have attempted to solve the problem of expensive tire renewals by the use of various types of wooden and combination tires, and the use of resilient wheels. However, considering that by far the greater number of commercial automobiles of all types are still using and being equipped with rubber tires of the same general type used for the past eight or ten years, it seems that solid rubber tires, expensive as they are in all respects when used on large vehicles, are at present the most satisfactory solution of the problem.

"Another objection to the use of large trucks is their inability to exert sufficient tractive effort under all conditions of loading and road surface. As a remedy, some manufacturers furnish sand boxes for delivering sand under the driving wheels, as in railroad practice, while others endeavor to overcome this difficulty by driving all four wheels. The first method is an unsatisfactory makeshift, while the latter necessitates expensive complication of the propelling and steering mechanisms, with the extra weight of these parts assisting depreciation.

"The six-wheel vehicle is a step in the right direction, but the complication inseparable from this arrangement and the expense of building and maintaining this complicated construction detracts seriously from the attractiveness of the six-wheel proposition.

Unless at least four wheels are driven, the traction disadvantages of the two-wheel drive are always present. When four or six wheels are driven the objections stated above also count against this system.

"The system employing a tractor and trailers is used abroad to some extent, and has the advantage of distributing the load on a number of wheels. But the objectionable feature of having but one pair of driving wheels counts against the system; because, unless the driving wheels are provided with cleats to assist propulsion, it is impossible to haul a paying load at all times, and even with cleats the above is not possible if the road has deep sand or mud upon it. The use of cleats is objectionable because they cause the load on the driving wheels to be concentrated on comparatively small areas of the road surface, causing it to deteriorate rapidly.

"Col. Renard realized the shortcomings of the above system when he developed the road train system which bears his name. It consists of a train of vehicles, the leading vehicle having mounted upon it the powergenerating, speed-controlling and steering apparatus. A shaft arranged with the proper number of universal and slip joints extends throughout the length of the train and transmits the power of propulsion to the driving wheels of each vehicle. Thus it is possible to carry a large and therefore a well paying load without having excessively large individual vehicles, causing rapid depreciation of same due to the inability of providing resilient tires or wheels or springs for carrying heavy loads. The road surface is also protected, because the unit load on same is reduced, the weight being distributed on a greater number of wheels and therefore on a greater area of road surface. In addition, rubber tires are not necessary because sufficient tractive effort is obtained by the increased number of propelling members. Steel tires may be used on the trailing vehicles because there is no mechanism except the comparatively simple propelling and steering apparatus mounted on them, and on the leading or power-furnishing vehicle rubber tires are allowable."

It seems to the writer, after studying the Renard system, that its advantages may be retained and the complication of the power transmitting and controlling apparatus reduced and these parts made more efficient by the use of a modified system. This, he describes as follows:

"The leading vehicle has mounted upon it the steering and control apparatus, a source of motive power, storage battery, steam or internal combustion motor, but preferably the latter, on account of its simplicity and small weight per horsepower. The motor is coupled to an electric generator which furnishes current to a pair of electric motors on each vehicle. The vehicles are connected by means of a bar which transmits the steering effort from the drawhead at the rear of the leading vehicle to the front axle of each following vehicle. The length of this bar and the position of the front axle are so determined in reference to the rear axle of the leading vehicle, that the entire train follows the same course when turning. The vehicles are also connected by flexible electric conductors, arranged so as to be readily connected or disconnected when it is desired to place a vehicle in or out of the train.

"Three methods of control suggest themselves: First, the ordinary method of operating the internal combustion motor at a constant speed to obtain a constant voltage at the generator, and then, by means of a series paralleling controller, connecting the fields and armatures of the motors in various combinations, virtually as done in street car and electric train service. Second, a method in which by varying the speed of the generator its voltage is varied correspondingly, causing a proportional current to flow through the motors, making their speed and torque vary. Third, a method whereby varying the voltage of the generator, by changing its field excitation, its speed meanwhile remaining constant. causes an effect similar to that of the foregoing method. It would probably be found advisable to obtain the field current for the generator from an exciter mounted on the end of the main generator shaft, to save weight, and having its output controlled by the driver of the train.

"With the two latter methods, it would also be found advisable to provide a switch for connecting the two motors on each vehicle in series combination for climbing grades and for starting when the train was fully loaded. This switch could also be used for reversing the direction of rotation of the vehicle motors.

"The generator should be designed to furnish a direct current at 220 volts and the windings should be so arranged that when the output of the generator nearly equaled the output of the gas motor, the voltage of the generator would decrease and thus decrease the current flowing to the vehicle motors. This feature, while not absolutely necessary, is desirable because at no time is it possible to overload and stall the gas motor by careless operating. For instance, consider that the motors of the train, which are 220-volt direct current series motors, are operating in multiple combination, and that the train approaches a grade which requires more power than the gas motor can furnish to the motors in multiple combination. The generator voltage would decrease and thus prevent the vehicle motors and the gas motor from being overloaded, and if the driver should persist in not operating the switch to connect the vehicle motors in series combination, the train would come to a standstill if the power required was greatly in excess of what the gas motor can supply.

The chief source of difficulty with the average vehicle of current design, is the battery, as he further points out. The motor, and in the case of the gasolene-elec-

tric unit, the generator as well, are above suspicion, so that the only probable sources of trouble in a system of the sort in question, would be the controller and the conductors carrying the current to the various units. Such a train, in his opinion, would not weigh more than a train equipped with an entirely mechanical transmission, would not cost as much to build, and would operate more efficiently, and at a lower maintenance

"In this country multiple unit road trains have been constructed by the Gibbs Engineering and Manufacturing Co., and Alden Sampson," he continues. "The first Gibbs train consisted of a power wagon and two trail wagons. . . . The power wagon has mounted upon it a three-cylinder gasolene engine direct connected to a generator furnishing power to motors driving the rear wheels of all the vehicles. The leading vehicle is equipped with solid rubber tires and the trailers have iron tires. The speed of the train was regulated by a two-motor street car type controller so modified that by operating the drum intended for reversing the car motors, the vehicle motors, which were regular series wound electric vehicle motors, would be connected in series or multiple combination. . .

"The second Gibbs train consists of a power wagon and four trailers. The power wagon has mounted upon it two three-cylinder gasolene engines driving a double commutator generator through positive clutches on the engine shafts and Morse chains. The rear wheels of all of the vehicles are driven by series motors through gearing and roller chains."

The road wheels, in particular, he calls attention to, which, he says, "are steel discs flanged at the outer circumference. The discs are riveted to bronze bushed steel hubs and steel tires eight inches broad. Speed regulation is obtained by means of a controller similar to the one used on the first train, with the exception that the controller drum generally used for reversing the car motors is in this case used to connect the two windings on the armature of the generator in series or parallel. . . .

"This train was used to transport machinery and supplies from a railroad to a mine in Arizona. The route is 115 miles each way and leads through a desert and mountainous country.

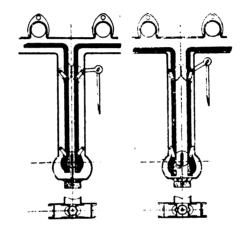
"The Alden Sampson train, which was exhibited at the last Madison Square Garden show, consists of a power wagon and two trailers, the former carrying a four-cylinder gasolene motor, driving a dynamo by a silent chain. The power plant, which occupies the forward part of the vehicle, is mounted on a separate spring suspended frame, while the rear part is arranged for carrying a load. All the vehicles are of the six-wheel type, the large center wheels being independently driven on all of the vehicles. . . . The trailers are double-ended, so that they may be operated in either direction."

THE MOTOR WORLD

ORIGINALITY IN INDUCTION PIPE

Its Modification of Throttling Action—
Features Reducing Sectional Area
Through Its Entire Length.

Among other confusing notions which a close study of the carburetter problem breeds, is the idea that the usual methods of throttling by restricting the area of the delivery pipe, cutting down the cross section of the gas flow at one point only, gives it opportunity to expand after passing the valve, thereby robbing it of some of its heat, and tending to cause condensation, with consequent upsetting of uniformity and general reduction in the value of the gas from the standpoint of its combustible quality. On this account, the poor running



of many motors when throttled is accounted for in a comparatively simple manner.

To overcome this difficulty, an English inventer, W. Gillett, whose Gillett-Lehman carburetter already has been described in these columns, has developed a new form of induction pipe in which the throttling action instead of being confined to the valve alone, as is ordinarily the case, has the effect of reducing the sectional area of the induction pipe throughout its whole length, thus ensuring uniform velocity in the gas for the entire distance it must travel after leaving the mixing chamber, preventing any tendency to pocketing, eliminating re-condensation, and securing permanence in the gas to a degree which is impossible of attainment with the ordinary arrangement.

As shown in the accompanying illustration, the induction pipe, at the base of which the fuel jet is located much in the ordinary way, instead of being the usual simple conduit, comprises an outer casing, within which are mounted a couple of moveable vanes running its whole length and coupled together by means of an external mechanism in such a way that the movement of a suitable lever causes them to move toward one another or apart, as the case may be, thus varying the area of the passage. Instead of being round or oval, the outer casing is rectangular in section, and the move-

able vanes fit its sides tightly, so that the space enclosed between them must at all times form the conductor for the gas. When open to their full capacity, the area is nearly the same as that of the outer casing itself, but when closed, as for running under throttle, the area is considerably reduced, the upper curved portions of the vanes also rising as well as approaching one another in such a way as to reduce the working area of the intake manifold as well as the induction pipe itself.

The idea is distinctly a novel one, and though introducing an amount of complication which a year or two ago would have been thought absolutely unjustifiable by the requirements of the case, is sufficiently in line with present theories to ensure careful consideration for it. There can be no doubt that re-condensation does occur in the average manifold and to an unpleasant degree at times. Whether it is only to be overcome by some mechanical means such as this, or whether it may be obviated by some more subtle method, remains to be seen.

One Rule Without an Exception.

A rule to which there should be no exception is: "Never start the engine when the car is standing over gasolene." Frequently when filling the gasolene tank some of the fuel finds its way to the ground, either from overfilling or because of carelessness in pouring into the filler hole or funnel. To start the engine over this overflow is to invite serious trouble for it is often that sparks are discharged from the muffler when the engine races and this is especially true if the muffler contains much soot. Occasionally a leak in the gasolene pipe or tank, or maybe a carburetter float chamber in which the seat of the needle valve needs grinding, will permit of the gasolene forming in a puddle when the car is standing on the street. It is important to stop such leaks and it is better to keep the car in motion than to stand over exposed gasolene, which a match, carelessly thrown in the street, may ignite.

Precautions in Removing the Magneto.

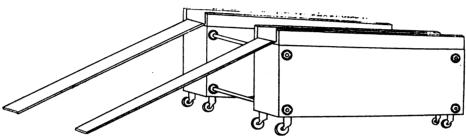
It is so easy to remove the average, modern, high tension magneto, and the temptation is so great to dismount it whenever the least excuse presents itself, that the usual caution as to observing its timing before doing so, cannot be repeated too often. All that is necessary is to see that the driving gears are properly "spotted," and that the marks are sufficiently intelligible so that on putting the device back into place it will be possible to mesh the gears exactly as they were in the first place. A very small slip in this respect may be sufficient to upset the running of the motor and necessitate the complete re-timing of its ignition system, especially when the operator is not sufficiently well acquainted with the properties of the magneto to be able to locate the trouble at once and remedy it correctly.

PORTABLE SUBSTITUTE FOR A PIT

Easy and Inexpensive to Construct—May also be so Made as to Serve as a Turn Table.

No matter how accessible the parts of an automobile may be, the necessity for getting under it arises sooner or later, than which nothing in connection with the repair of a car, is more disagreeable.

While a pit offers the simplest solution of the difficulty it is not always practical for the private garage; and the small repairman frequently has not the facilities for this adjunct to his repair plant. It is, howin the use of the brakes on steep descents. By setting the emergency in a position where it will permit of the car attaining only the desired momentum and releasing it after a short distance has been traveled, substituting for it the foot brake, and in turn releasing that before it becomes heated, both brakes are kept cool and the wear on each is reduced to the minimum, as the real destruction comes from heat rather than from service without heat. On hills that are long it is a good plan to cut off the spark and have the momentum of the car turn the engine over a few times in this way cleaning out the cylinders and cooling them. If this is done it is desirable to use caution in starting up the power, as a sudden jerk will occur unless the speed of the



SUBSTITUTE FOR PIT AND TURNTABLE

ever, a comparatively easy matter to construct a device that will give the opportunities for working beneath the car without entailing the expense incident to the construction of a pit. One of the sort is shown by the accompanying illustration.

First get two pieces of channel iron several inches wide, and of sufficient length to be two or three feet in excess of the wheel base of the car. Mount these on timbers or castings that are twelve or fourteen inches high and have an inclined approach to each channel. Place these two channels so that the distance between them is the same as the tread of the car, and then run the latter up either under its own power or by using jacks. The space that is thus gained beneath the car will be found to be sufficient to enable the repair man to work under it at great advantage. If the two structures are tied together in some manner and castors put under them, the whole will serve admirably as a turn-table or portable stand.

Uses of the Emergency Brake.

The emergency brake, as the name implies, is a brake for use in tight places where something more than the foot brake becomes necessary. But the emergency brake has other uses than that of the sudden stopping of the car.

When descending a long hill, especially if the grade is steep, the continued use of the foot brake causing an intense heating of it, and if the construction is such that a lining is employed in the brake shoe, it will be quickly destroyed by the continued friction. To prevent this destruction, which entails some expense and considerable labor in replacing the lining, it is well to alternate

car is in accord with the speed of the engine.

Warming a Car with Exhaust.

The use of hot air from the exhaust to heat a motor car for winter touring is the novel scheme of J. D. Turner, a Franklin owner of Grand Forks, N. D. Mr. Turner recently made a 700 mile trip in a Franklin runabout from Grand Forks to Quincy, Ill., in the midst of a real western blizzard, but with his new heating apparatus and a closed canvas top he and his companion went through the zero weather in comfort.

The method of heating consisted of placing on the floor of the car a coil of pipes connected directly with the "main exhaust." The "main exhaust" of the Franklin carries off only about 30 per cent. of the burnt gases, and its temperature was just about right to heat the ear comfortably. The remainder of the exploded gases in the Franklin passes out through the auxiliary exhaust, which opens at the lower end of the cylinder.

Causes and Effects of Overheating.

Running with too rich a mixture, too late a spark or too much throttle opening all tend to cause the same difficulty—overheating. The result in either case, must be a slow explosion, which results in a high cylinder temperature throughout the whole of the working stroke, instead of only during the first part of it, and a high exhaust temperature and pressure. The result is that the lubricant is burned from the cylinder walls before it has time to perform its proper function; that the surface of the exhaust valve becomes pitted; and that the engine tends to overheat.

DRESSING FOR LEATHER TOPS

Formulas for Preparations Adapted to Old or New Material—Improving Wear as Well as Appearance.

The competent chauffeur is one who in addition to his ability to drive the car, assumes a personal interest in its upkeep and appearance. The power plant, while it may be his chief concern, is not the only part that receives his attention, for the body and accessories require some care, and if a casual observer sees evidence of these minor parts having received it, it safely may be concluded that the entire equipment is receiving adequate care.

One of the problems that are presented to the man, whether chauffeur or owner, who desires to give proper care to every part of the car, is the method of preserving a leather top. As long exposure to the air will cause the leather to become dry, unless it receives a proper dressing, it naturally follows that in this condition cracks will occur when the top is folded—as it generally is—and when the cracks appear the surface is, of course, lost. For the treatment of leather which has begun to "go bad," a good mixture is the following:

To one pint of neatsfoot oil add a quarter of a pound of beef suet, completely melted so that no lumps remain; stir the mass thoroughly before adding a tablespoon full of melted beeswax; shake in a closed dish or can sufficiently to insure a perfect mixture, and then add one ounce of ivory black, and again shake thoroughly. Rub this on the top with soft cloths, taking care to rub the mixture well into the leather; the effect will be to cool the top and impart to it a redeeming elasticity.

In cases where the top has suffered greatly from wear or harsh treatment, it is well to obtain a first class top dressing which can be purchased ready for use or prepared in the following manner:

One pint of liquid asphaltum, one pint elastic finishing varnish, one pint of boiled linseed oil, one-half pint japan, a pint of turpentine; add to this one pound of ivory black and mix thoroughly. Use freely and rub in well.

To Start Magneto from the Seat.

Starting the motor from the seat when high tension magneto ignition is employed, has been considered, if not impossible, at least so difficult as to be hardly worth considering as a possibility. In a recent foreign invention in this line, however, just this feature is made possible by the adoption of a ratchet driving gear for the magneto armature, whereby it may be rotated by hand to obtain the first one or two "shots," the gear afterward picking up the shaft at the proper point in the cycle to insure correct firing sequence.

LAW TO PERMIT HILL CLIMBING

Massachusetts Senate Reports Favorably on Bill to Authorize the Closing of Roads for Contests.

There is now a probability that the Worcester Automobile Club will hold another climbing contest on Dead Horse Hill during next summer. The committee on roads and bridges, of the Massachusetts Senate has reported favorably on a bill providing that local authorities may grant permits to persons to drive automobiles and motorcycles in hill climbing contests during specified times on specified parts of the highway at any rate of speed. The bill is practically the same as section 9 of chapter 52 of the Revised Statutes, which authorizes the mayors of cities and selectmen of towns to close public roads temporarily for bicycle races.

The senate committee gave a hearing on this bill on Friday, 6th inst., when the Worcester Automobile Club, which had asked for such legislation, was represented by Daniel F. Gay and others. Mr. Gay told the committee that the road on Dead Horse Hill is an abandoned one on the Boston and Hartford turnpike which has been fixed up by the club at an expense of about \$1,500 for the purpose of automobile hill climbing. It is no longer a public thoroughfare between any particular towns, and was little used before the Worcester Automobile Club repaired it.

On two occasions the club arranged climbing contests, the last being two years ago, when approximately 10,000 people assembled. Sixty patrolmen were engaged to keep the street clear, but it was found that they had no authority. All they could do was to suggest to the spectators that they "kindly step back" to make room for the automobiles to come up. No body of men has the authority to close a highway for an automobile contest. Hence the club asks fhat the Legislature confer upon the mayor and board of aldermen of a city and the selectmen of a town authority to give special permits for special occasions to close the streets during a specified time, and upon a specified stretch of road. It was the purpose of the Worcester Automobile Club to make the law general so that any city or town might benefit from it, though the club has no other direct interest in it than to secure conditions of safety for its own contests on Dead Horse Hill. If the bill is rejected there will be no contest, otherwise the club may arrange one for this year.

Start of a Four Years' World Tour.

One of the most extensive automobile tours of the world was begun last week when Mr. and Mrs. H. A. Hover left Los Angeles in a Maxwell car for a four years'

THE MOTOR WORLD

tour of the world. Starting from Los Angeles they will go south across the line into Mexico, returning to Los Angeles by a different route. Going north, they will follow the coast road to San Francisco and from there will go on to Portland and Spokane, via Seattle. The next jaunt will be eastward, through Idaho, Montana and the Dakotas, turning north to Winnipeg into Canada. Hover says he will be the first to drive an automobile from Winnipeg to Toronto. From Toronto they will go to Chicago, by way of Buffalo, turning back to New York. From New York the car will be shipped to Naples. The first winter the Hovers expect to cover the Riviera thoroughly and will go into Algeria and the Nile region. The summer will be spent in Northern Europe, touring in England, Scotland, Ireland, and Sweden. By the winter of 1910 the Hovers expect to have seen most of Europe and will then go on to India, and from there to China, Japan and the Philippines. The trip is being made purely for pleasure and Hover states that he will travel five years if four is not enough to see all the places of interest in the world.

Minneapolis to Revise Ordinances.

All automobile ordinances now in force in Minneapolis are to be repealed and a new ordinance is to be adopted. This move results from representations made to the city council through Attorney Will, representing the Minneapolis Automobile Club, that a new ordinance recently adopted is not consistent with former ordinances passed. It has been decided to increase the price for tags from 50 cents to \$1, on the ground that a tag that would be acceptable to owners of fine cars cannot be furnished for less. The Minneapolis Automobile Club is to furnish a draft of the proposed new ordinance.

Cab Driver's Costly Carelessness.

Reckless taxicab drivers would do well to remember the fate of the Parisian driver who ran into and killed a professor. The chauffeur was not the worst sufferer for he was sentenced to only three months' imprisonment, but the company figuratively got the axe. It was made to pay damages of \$10,000 to the victim's widow, together with \$5,000 to an unmarried daughter and \$1,400 to each of four other children.

Bar Harbor Again Bars Automobiles.

Bar Harbor (Mount Desert Island, Maine) will remain closed to the automobile for another season. At the town meeting held last week in the town of Eden, of which Bar Harbor is a part, the citizens voted on the proposition to permit automobiles to be run on what is known as Bay View drive, which was defeated by a vote of 415 against 174.

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau St., New York City.

DIG REGISTRATION POLLOWS SHOW

Sudden Increase in Demand for Massachusetts Licenses—Statistics of the State's Income from Motorists.

There has been a notable increase in the number of automobiles registered in Massachusetts within the past three weeks, which by some people is attributed largely to the influence of the recent show in Boston. E. J. O'Hara, who has charge of the automobile department of the State highway commission, states that the week before the show 314 automobiles were registered; during show week the number went up to 438; and last week the figures climbed toward 600. Motorcycle registration also took a jump. Sixteen new dealers were registered while the show was in progress, and eight others have taken out certificates since its close.

Since the first of January, when the law required that all motor vehicles be re-registered, the highway commission has issued about 6,900 certificates for automobiles, 300 for motorcycles and 275 for dealers. The demand for private operators' licenses has hardly begun and only 346 new licenses of this sort have been issued. The number of professional chauffeurs, however, is growing rapidly and it begins to look as if the demand for operators for hire would be more than supplied. Since the beginning of the year 231 new chauffeurs' licenses have been issued and 460 have been renewed. Up to the middle of the month, when the figures from the automobile department were last tabulated, the commission had taken in more than \$40,000 from this department. Of this amount over \$38,000 was for registration of cars and under \$2,000 for licenses. The commission is preparing for a heavy rush during the next six weeks.

No Dinky Runabouts for Police Head.

When Superintendent of Police Regan, of Buffalo, heard that the Board of Aldermen is in favor of buying a \$900 car for him he laughed.

"Think of me riding in one of those dinky little runabouts," he is quoted as saying, as he threw out his chest and contemplated his stature. "Why, I would have to let my feet hang over the dashboard. Huh, \$900 wouldn't buy the wheel of the kind of an automobile that is needed for the police department. What we need is a big touring car that will carry a half dozen officers. No doll carriage for me! Reckon I'll stick to the old nag. He can't negotiate the New York to Paris race course, but he always gets round in time for oats. The police department needs a big car, which can carry enough detectives to handle a case in time of emergency. If the city's money is to be spent upon an automobile one should be provided that will prove serviceable."

The Week's Patents.

877,613. Driving Gear for Motor Road Vehicles. Percy G. Tacchi, Acton, London, England. Filed Nov. 18, 1905. Serial No. 287,956.

1. The combination with a casing, of an internally threaded sleeve carried by said casing, a driven shaft passing through said sleeve, an externally threaded sleeve mounted on said shaft with its threads in engagement with said internally threaded sleeve, a rack and pinion adapted to rotate said internally threaded sleeve on its shaft to move the same longitudinally, a clutch cone adapted to rotate the said internally threaded sleeve, means for preventing longitudinal movement of said clutch cone or said last mentioned sleeve and a driving shaft provided with a second clutch cone with which said first mentioned clutch cone may be engaged by the longitudinal movement of the sleeve.

877,709. Automobile Lift. Charles W. Gearing and William J. McGee, Franklin, Pa. Filed Aug. 29, 1907. Serial No. 390,595.

1. In an automobile lift, the combination with the floor of a garage, of channels let into said floor and adapted to receive the wheels of an automobile, and means for raising said channels.

877,711. Instrument for Indicating Speeds, Distances Covered, and the Like. Eugene V. Gratze, Leytonstone, England. Filed Oct. 16, 1906. Serial No. 339,221.

1. In combination, a substantially annular stationary magnet, a revolving core positioned between the poles of the magnet, a metallic casing adapted to embrace the core and extending beyond both sides thereof, spring means for controlling the rotation of the casing, indicating means operated by the casing, and means for rotating the core.

877,714. Combined Power Transmission and Automatic Mechanism for Motor Driven Vehicles. Thaddeus W. Heermans, Evanston, Ill. Filed Jan. 22, 1907. Serial No. 353,519.

1. In a motor driven vehicle, the combination with the motor driven shaft, the driven axle and power transmission connections between said motor shaft and driven axle, of an automatic brake mechanism cooperating with said power transmission connections, means whereby the brake mechanism is automatically operated to arrest the vehicle upon tendency of the load to drive the vehicle, and means for disconnecting the driven axle from said brake mechanism at a point between the axle and brake mechanism.

877,726. Vehicle Rim. Walter J. Nordlund, Oakland, Cal. Filed March 4, 1907. Serial No. 360,440.

1. A wheel rim comprising a fixed section and a movable section, said section having opposed interlocking cam surfaces, and a rotatable member operable between the fixed and movable sections and engaging both sections whereby one section may be moved axially relative to the other section.

877,730. Explosive Engine. Herbert R. Palmer, Cleveland. Ohio, assignor to The Palmer Oil Engine Company. East Cleveland, Ohio, a Corporation of Michigan. Filed Aug. 28, 1903. Serial No. 171,041.

1. In an explosion engine, in combination, a cylinder and piston, on explosion chamber upon said cylinder, a valve in said explosion chamber, means for conveying motor fluid adjacent to said valve, an injector plunger adapted to cross and thereby block the outlet for said motor fluid and at the same time inject an explosive charge of such fluid into said explosion chamber through said valve, and a variable cam for controlling said injector.

877,750. Motor Vehicle. Walter G. Windham, London, England. Filed Jan. 23, 1906. Serial No. 297,427.

1. In a motor vehicle the combination of a chassis, a front seat secured thereto and suitably disposed for the driver, longitudinal runners on the chassis, and a rear half-body detachable from the chassis by sliding rearwardly upon the runners, substantially as set forth.

877,762. Operating Device for Motor Vehicles. Pierre A. Darracq, Suresnes, France, assignor to Societe A. Darracq & Cie. (1905) Ltd., Suresnes, France. Filed March 29, 1907. Serial No. 365,323.

1. In a device for controlling change speed, reversing and brake parts for motor vehicles the combination of a frame, springs on said frame, a driving axle secured to said springs, a change speed a reversing and a braking device upon said axle, a pivoted balance beam on said frame, a fork connecting said balance beam and said axle, means upon said beam for pivotally supporting a plurality of levers, means connecting said levers to the devices upon said axle and means to enable the driver to operate said levers.

877,835. Combined Steering and Driving Axle. Paul Daniel, New York, N. Y. Filed March 12, 1907. Serial No. 361,930.

1. A motor vehicle, comprising a cross member adapted to support the vehicle body, a steering knuckle pivotally connected to each end thereof, wheels rotatably mounted upon said steering knuckles, a driving axle comprising a plurality of sections, one of said sections extending through one of the steering knuckles and having an enlarged end, and the other of said sections being connected thereto by a universal joint within said expanded end and anti-friction bearings intermediate said expanded end and said steering knuckle.

877,856. Spring Tire. Thomas J. Mc-Carthy, Los Angeles, Cal. Filed March 27, 1906. Serial No. 308,197.

1. A wheel tire comprising concentric bands, one embracing and radially movable over the other and one of said bands fixed to the wheel, circumferentially arranged springs radially seated within and between said bands, fittings secured between said springs and said bands and provided with lugs at each corner, and two sets of diagonally disposed springs arranged side by side between each two of said radial springs and connected at their opposite ends with said lugs from the upper corner of one fitting to the lower corner of the other fitting.

877,924. Air Compressor Mechanism for Self-Propelled Vehicles. Ernest E. Hampton and Cicero G. Smith. Palisade, Colo. Filed Oct. 1, 1906. Seriel No. 336,965.

1. In air compressor mechanism for vehicles, the combination with a moving part of the vehicle, of an air receiver mounted on the vehicle, and means actuated by the air in the receiver for automatically rendering the compressor mechanism inoperative when the air has reached a predetermined limit of compression within the receiver, said means comprising a cylinder, a piston

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

ALL kinds second hand automobiles. Nuf sed. OTTO B. SCHMIDT & CO., 1242 Michigan Ave., Chicago, Ill.

1908 Winton Sixteen-Six; new; \$3,600. X, care Motor World, Box 649, New York City.

THE AUTO LIVERY & GARAGE, Wilson Mew, Prop.—Automobiles rented, stored. Supplies. 57 Maple St., Chicago, Ill.

TIRE SPECIALIST—Auto tire repairing, retreading, recovering, and rebuilding. Right work, best materials, combined with modern methods and fair prices. Discount to the trade. CHAS. A. BEBBER, Jr., 331 Michigan Ave., Chicago, Ill.

W E are headquarters for second automobiles, out of the high rent district.
Consult us before buying elsewhere. A. L.
JULIAN, 568 Wabash Ave., Chicago. Look
for White front.

FOR SALE—Haynes Model O, 4-cylinder 30 horsepower, in first class condition; just overhauled at factory; Sprague top, speedometers, shock absorbers; tires in good condition; must sell; have bought another. H. B. COBLENTZ, M.D., 649 Florida Ave., N. W., Washington, D. C.

FOR SALE—No. 14 sliding gear transmissions; 90 bodies, primed only; 75 bodies, painted only; 72 bodies, painted and trimmed; 69 sets bevel drive axles and hubs; 130 frames, unassembled; 30 frames, assembled; 35 radiators; 50 tanks; 59 two cylinder opposed engines, 5½5; 105 sets springs; 48 mufflers; 98 sets universal joints; 47 steering wheels, 14-inch; also various quantity of other parts, all suitable for 2.000 pound touring car or runabout. RANDS MFG. CO., Detroit, Mich.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

THE MARMON "A Mochapical Magafephore"

N Meeting in Car A straight Chan

For catalog, address Dept. 16.

NORDYKE & MARMON CO.

(Estab. 1851)

INDIANAPOLIS, IND.

INVADER

Boston Branch Motor Mart 91 Church St. New York Carford Motor Car Co.

CHAS. F. KELLOM & CO., Philadelphia. Pa.

in the cylinder, a spring acting on the opposite face of the piston from that which is engaged by the air, and a rod connected with said piston and having a part adapted to engage the compressor mechanism for the purpose set forth.

877,961. Tire Construction. William F. Stearns, Batavia, N. Y. Filed Feb. 15, 1906. Serial No. 301,191.

In tire construction, the combination of a channel iron with an elastic tire having a laterally projecting, circumferentially extending flange at each side of its base; a series of separate, quadrilateral, metalic, open bodied cross pieces spaced apart one from another, and embedded crosswise of and in the tire, with their end walls in contact with the inner walls of the side flanges of the channel iron, and the outer surfaces

of their end walls substantially uush with the outer surfaces of the tire flanges; and a circumferentially extending retaining wire around each tire flange, the wires binding the ends of the cross pieces against the inner side walls of the channel iron flanges, and the transverse portions of the metallic cross pieces being substantially in a transverse plane of the tire, co-incident with the outer surfaces of the tire flanges.

"Show the Way"
with the
Standard Lamp of
the Automobile—



No detail is overlooked in the construction of Solar Lamps. They are more efficient as regards lighting qualities; more simple in construction and more durable than any other motor lamp.

In assembling, the parts of Solar Lamps are riveted—not soldered. The internal method of screw assembling insures a smooth exterior, permitting case of cleaning. All Lens Mirror Searchlights are fitted with special B & L Solar short focus Mangin Mirrors—these mirrors are made exclusively for Solar Lamps.

Badger Brass Manufacturing Company

TWO FACTORIES

Kenosha, Wis.

436 Eleventh Avenne, New York

82 MILES AN HOUR WITH BOSCH MAGNETO

At Ormond, March 6th, Bernin driving Renault Car won 100 mile race equipped with Bosch Ignition System.

Mile in 35 Seconds with Bosch Magneto

Fiat Car, driven by Cedrino on same day made new world's record for middle weight machines. Fiat also equipped with Bosch Ignition System.

MOST RELIABLE IGNITION SYSTEM IN THE WORLD

BOSCH MAGNETO COMPANY, Inc., 160 West 56th Street, New York

MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.





NEW SENSATION

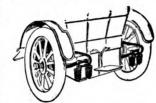
Equip your car with

Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking. for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch Removed to New York Meter Mart Bldg.



Nothing can win approval without merit



Splitdorf Ignition

Has Attained National Repute **Because of Unquestioned Merit**

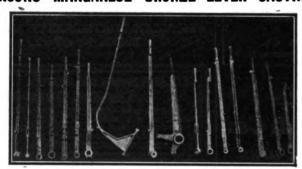
The confidence in SPLITDORF Ignition that has made this business the greatest of its kind is rooted in Splitdorf quality.

C. F. SPLITDORF

Walton Ave. & 138th St.

NEW YORK

PARSONS' MANGANESE BRONZE LEVER CASTINGS



Sole Makers THE WILLIAM CRAMP & SONS SHIP & ENGINE Philadelphia, Penna. BUILDING COMPANY,

Our new 1908 Catalog and



AUTOMOBILE BODIES



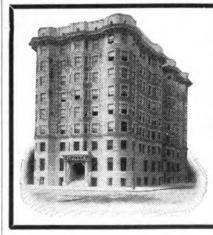
TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.



Hotel Tuller

New and Absolutely Fireproof. Adams Ave. & Park St. DETROIT, MICH.

AUTOMOBILE **HEADQUARTERS**

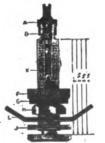
In center of Theatre, Shopping and Business district.

and Business district.

Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
A la Carte Cafe Grill Rooms
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.
L. W. TULLER Prop.
M. A. SHAW, Mgr.

PESTABLISHED 1844

SCHRADER UNIVERSAL VALVE Trade Mark Registered April 30, 1895



SIMPLE AND ABSOLUTELY AIR TIGHT

Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 21/2 inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trede by All Tire Manufacturers

Messisciured by A. SOHRADER'S SON., Inc., 28-30-32 Roso St., New York

CIMIOTTI GARAGE

New York City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen. Try us.

> Metropolitan Agents for "PULLMAN" CARS

> > Tel. 2686 River.

HAYNES

Always Has A Perfect Score

HAYNES AUTOMOBILE COMPANY Members A. L. A. M. KUKOMU, IN KUKOMU, IND.

Oldest Automobile Manufacturers in America NEW YORK, 1715 Broadway-CHICAGO, 1702 Michigan Av.

Me

a Mitchell. Phone "that" to any Mitchell Agent and he'll take you out if you're interested in the best value for money outlay you ever saw in the automobile line. Mitchell cars sell themselves. Prove it. Ask for catalog 18.

MITCHELL MOTOR CAR CO., RACINE, WIS.

NEW YORK

Exclusive LOGAN

All transmission gears and differentials of K chrome nickel steel. Krupp's

For other features write for catalog to

THE LOGAN CONSTRUCTION COMPANY. Chillicothe. O

LAVALETTE & CO. 80% of Magnetos used in 6-cylinder cars are **EISEMANN High-Tension MAGNETOS**

112 West 424 Street.



THE "AURORA"

Runabout \$775-20 H. P. Commerciai Wagon \$1000—20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS,

THE THOMAS

America's Champion in the New York-Paris Race.

Send for map and route card.

E. R. THOMAS MOTOR COMPANY BUFFALO, N. Y.

Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St. Syracuse, N. Y.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & BUBBER CO., Akron, Ohio

TRUPPAULT-HARTFORD Trade
SHOCK ABSORBER
Mark

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.
Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO.,

66 Vestry St., New York E. V. Hartford, Pres.

WEBER PORTABLE TRUCK TURNTABLES

For Automobiles
All other Turntable Trucks are Infringements
We Own the Basic Patent



The U. S. Courts have just declared our Patent good and valid in suit against the Pike's Peak Manufacturing Co. We have started suit against "Norwood" for infringing. The only sure way of buying an Auto Turn-Table or Truck is to see that they are branded "The Weber Portable Turn-Table Truck. For sale by all Jobbers Headquarters and all orders to be sent to

THE .WEBER CYCLE & SUPPLY CO.
No.6 East Klowa St., Colorado Springs, Colo.

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are or-dering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.

To Owners of Cars Costing Over \$1800

Add the neat, snappy little Brush \$500 Run-about to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit



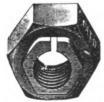
MICHELIN TIRE CO.,

Militown, N. J.

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write u

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07. Uso Columbia Lock Nuts

COLUMBIA NUT & BOLT CO., Inc., Bridgoport, Conn

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St., and Broadway and 73d St. CHICAGO—20 LaSalle Street and 1615 Wabash Avenue. FOBES AUTO SUPPLY CO., Portland, Oregon. DEI FOBES AUTO SUPPLY CO., Providence, R. I. St. BOSTON—292 Devonshire Street.
BUFFALO—724 Main Street.
DENVER AUTO GOODS CO.—Denver, Colo.
PENN AUTO SUPPLY CO.—Philalelphia, Pa.
SAVELL RUBBER CO.—Jacksonville, Fla.



\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumptio... A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY AUBURN, IND. Box No. 250

MAKE CASTINGS WE

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO. Pottstown, Pa.



STA-RITE PLUGS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE and see for yourself. Double or single Porcelain,—Mica or Magueto,—all kinds. All Good Dealers.

THE R. E. HARDY CO.,

85 Watta St., New York City

THE CHANDLER CO.

Name Plates and Stampings SPRINGFIELD, MASS.



THE N D E

IS RIGHT Built to outweer an auto and it will

Send for Booklet Index Speed Indicator Co. MINNBAPOLIS, MINN.





Gasoline and Electric-for Pleasure and Business Studebaker Automobile Co.. South Bend, Indiana

SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies SPRINGFIELD** METAL BODY CO., 366 Birnie Ave., Springfield, Mass.



High-Grade



Pressed Steel Frames **Transmissions**

Steering Columns Steel Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street.

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-

THE JACKSON

"No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder
Runabouts, Roadsters, Touring Cars,
15 H. P., 24 H. P., 35 H. P.
Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO., Jackson, Mich.

Bodies Repaired, Trimmed and Painted. Chassis Repair Department. J. M. QUINBY & CO.
Automobile Body Builders.
Newark, N. J.

Motor Car Accessories

Spark Pluga, Cable, Switches, Lampa, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO. Cleveland, Ohio.



For catalogues, address THE CONTINENTAL AUTO MFG. CO.



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.,
New York.

Address Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City. Western Inquiries
Parford Motor Car Co.
of Cleveland
1372 East 12th St.,
Cleveland.

McCORD LUBRICATORS - RADIATORS

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

Silent Powerful Fast

TYPE C 50 PP

2800 LBS 2800.00 WITH MACHETO 3000 00 Of the highest possible grade throughout.



Luxurious and Completely Appointed

PENNSYLVANIA AUTO MOTOR CO.,

Bryn Mawr, Pa.

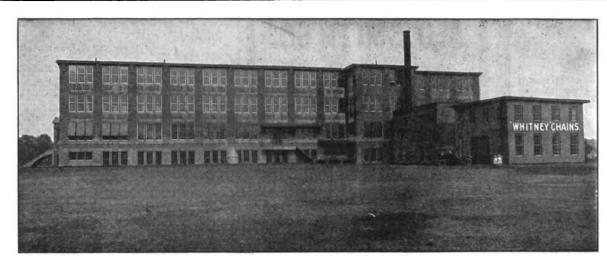
THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of

Name_

Address



We are now well settled in our

New Factory and

READY TO SHOW RESULTS

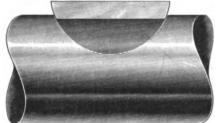
Prompt Delivery and Constant Improvement in Quality

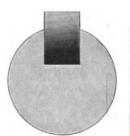
In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

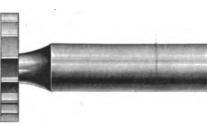
We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.



"WHITNEY" MACHINE KEYS and KEY SEAT CUTTERS
(For the Woodruff Patent System of Keying)



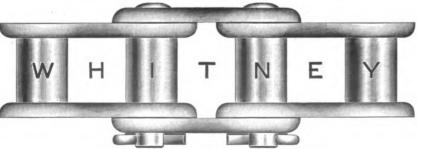






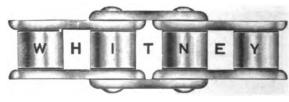
We carry 95 regular Sizes of keys and cutters in stock for immediate delivery

"Whitney" Detachable Bushing Chain—Patented



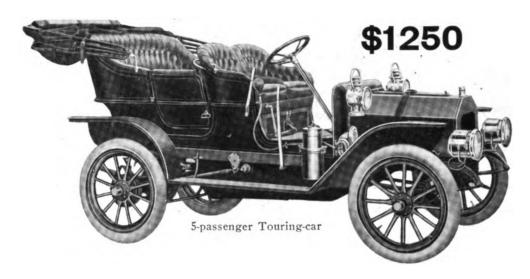
Bushing Chains are like Roller Chains- Without Rolls

Roller Chain



The Whitney Mfg. Co. Hartford, Conn.

Digitized by Google



REO

Big return on small investment

EARNS MONEY

I purchased my folding-seat REO for my own family but it has earned \$300 for me after hours, at livery work. It makes about 23 miles on a gallon of gasoline, with four passengers. It is as good as new. I have yet to find a hill too steep for it to climb.—D. F. Hyman, Shelton, Neb.

HELPS BUSINESS

Since 1905 I have run my REO Touring-car 20,000 miles. It is most economical in tire-wear. Oftentimes six months have elapsed without its being in the shop. It is continuously out of doors from 8.30 A. M. to 7 P. M. in summer's heat and winter's cold.—Charles Aldrich, M.D., Cleveland, Ohio.

Can you afford to overlook it?

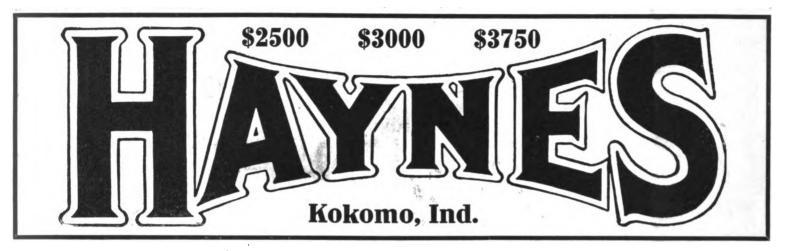
REO 4-passenger Runabout \$ 650 REO Roadster - - - \$1,000

REO 5-passenger Touring-car \$1,250 Prices f. o. b. Lansing

Write for the new REO catalogue. Ask any REO dealer to demonstrate what the REO will do for you.

R. M. OWEN & CO., Lansing, Mich.

General Sales Agents for REO Motor Car Company



Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money



Model K-4-cyl., 4%x5 **\$3500**

Model R-6 cyl., 4½x4¾ \$4200

Model N-4 cyl., 5x5 **\$3700**

Model T-6 cyl., 5x5 \$5000



Write for Particulars

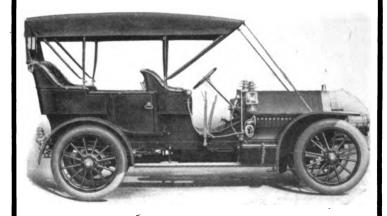
National Motor Vehicle Company

1007 East 22d Street

INDIANAPOLIS.



THE "JEWEL 40" THE "NON-SKIDDING" CAR



Compare following specifications with other cars at \$3,000.

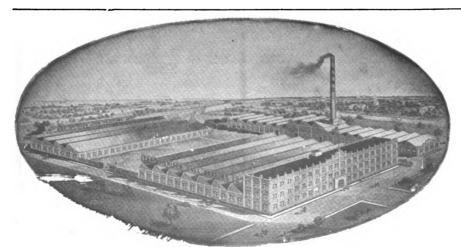
36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY

234 Walnut Street.

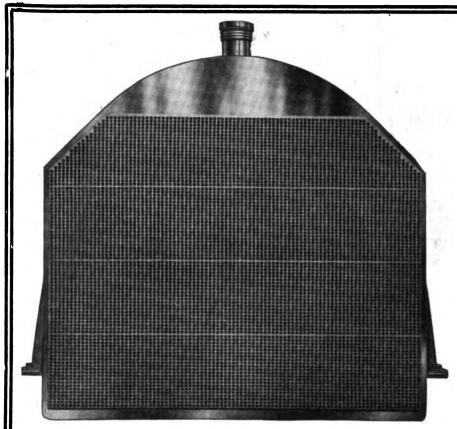
Massillon, Ohio, U. S. A.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park CLEVELAND, OHIO, U.S.A.



It's not what we say, but what Mayo Radiators have done, that has led to their adoption by America's best cars.

U"What's worth doing at all is worth doing well," is the policy on which Mayo Radiators were built and will continue to be built.

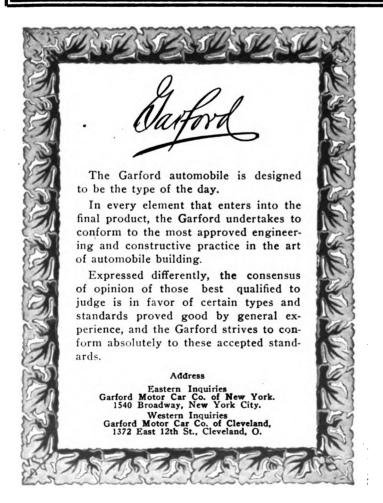
• Largely increased facilities enable us to take on a few new customers of the kind that place quality before price.

1 The Mayo Radiator is The Quality Radiator.

If you are a Quality Maker better write us at once.

> HONEYCOMB, CELLULAR OR FLAT TUBE TYPES.

MAYO RADIATOR COMPANY, New Haven, Conn.





We built the Palmer-Singer Six-Sixty to fill our ideal of what a high-speed touring runabout should be. It is the Sportsman's car De Luxe, and neither in this country nor abroad is there anything of its class and type to compare with it, irrespective of price.

Palmer-Singer Six-Sixty, \$2,850.

the Selden

Metropolitan Distributors Palmer & Singer Mfg. Co. 1620-22-24 Broadway, New York 1321 Michigan Avenue, Chicago

Car, 28-30 H. P. \$3,000



Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company; More Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.
Licensed under Selden Patent.

One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being ob-That was ourselves. But, unfortunately, we sold to the jobber also - and the jobber cut the price.

Then there was fun in the camp. That hurt us — it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that hurt the consumer, the dealer and ourselves. For the jobber knows

no law. So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact

figure the dealer pays. If he cuts,

he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co. 146 Wheeler Ave., Beloft, WIs.



Free Play

of the springs over slight inequalities with a retarding friction gradually applied in proportion as the shock becomes greater makes the riding easy and smooth over every kind of road, saves the tires, prevents broken springs and protects the engine.



Gabriel Shock Absorbers are the only ones that permit the full benefit of the springs up to their elastic limit, restrain gradually beyond that point and double the efficiency of every spring.

Can be attached to any car or any spring. Write for full description.

THE GABRIEL HORN MFG. CO. 1417 East 40th Street, CLEVELAND, OHIO

DOCTOR-

VISIT MORE PATIENTS OR HAVE MORE TIME TO YOURSELF

Your time saved pays for a Mitchell in one year

Ask one of the list below. Very likely you know some of them.

A Mitchell runabout makes five calls to a horse's one.

We will refer you to hundreds of doctors. Any one of them will tell you that they wouldn't be without a Mitchell car because the Mitchell Runabout simplifies their work. You make your calls and are through when the "doctor and the horse" are but half way if you

the horse" are but half way if you go in a Mitchell.

Then you can increase your practice without neglecting anybody or enjoy some needed recreation.
You doctors who are very busy cannot know what the Mitchell

really means to you until you have our agent take you over your route some day and "show you." The Mitchell is the handiest,

most reliable and economical run-

about obtainable.

about obtainable.

Make your calls just one day in a Mitchell Runabout. It will open your eyes to the time you can save. Any agent will be glad to take you any time. Just call him up.

The Mitchell Runabout at \$1,000

is the proven doctor's car.

The proof is in the fact that
Mitchell Runabouts to the value of \$1,000,000 have been bought by doctors in the last two years—1,000 of these handy cars being in use today by doctors of prominence.

Here are a few of the Chicago Doctors who use the Mitchellday-rain-sleet-snow-or every sunshine. An investment of \$40,000 is represented in this partial list.

Is represented in Dr. Hugh Patrick Dr. W. H. Allport Dr. E. B. Tuteur Dr. R. W. Holmes Dr. Wm. L. Noble Dr. F. R. Sherwood Dr. J. R. Ballenger Dr. G. S. Dobbins Dr. J. B. Honch Dr. A. J. Behrendt Dr. R. O. Knapp Dr. J. C. Hollister Dr. O. B. Smith Dr. A. Paulson Dr. F. Monge Lr. C. E. Paddock Dr. L. S. Simons Dr. W. D. Hawley Dr. B. B. Eads Dr. Henry Schmidt Ask these me

this partial list.

Dr. F. J. Buss
Dr. H. J. Dorn
Dr. G. A. Hopf
Dr. A. T. Horn
Dr. R. J. Gay
Dr. J. B. DeLee
Dr. N. Seibert
Dr. R. B. Preble
Dr. J. E. Hequenbourg
Dr. Paul Hulhorst
Dr. C. B. King
Dr. L. Ryan
Dr. L. Ryan
Dr. F. Stewart
Dr. P. S. Chancellor
Dr. Fred W. Gethro
Dr. G. H. Hovnanian
Dr. Geo. F. Pierce
Dr. W. H. Reid
Dr. J. H. F. O'Neil

Ask these men what they think and ask the Mitchell agent to take you out for a day's visits. No obligation on your part.

Catalog No. 18 describes the new models. Get it of the agent or write us.

I have used your 1907 Model Runabout for nearly a year and find it highly satisfactory for professional work in this city. It is easily cared for, ready for service in all kinds of weather, and I can unhesitatingly recommend it to anyone wishing a reliable

machine. J. E. Hequenbourg, M. D.

My 1907 Mitchell Runabout has taken me where 1 want to go and has brought me back without any trouble. It has climbed all hills on high gear. It has several times attained the speed of 43 miles per hour. It has averaged 2014 miles per gallon of gasoline. It has no cost me one cent for repairs. This ought to satisfy any-

Gregory H. Hovnanian, M.D.

I take pleasure in writing you that I have been using your four-cylinder runabout for the past two years, with perfect satisfaction. It has never failed me and has proved to be a great saver of time and energy.

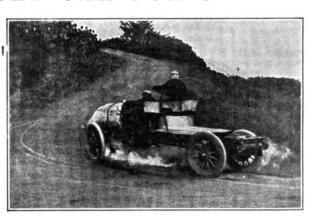
R. B. Preble, M. D.

MITCHELL MOTOR CAR CO.



INCOMPARABLE THE

FOR SERVICE CAR THE



CLEAN SWEEP FOR THE WHITE IN CALIFORNIA HILL CLIMB

The White Steamer won all three events in which it was entered in the hill-climbing carnival held at San Francisco in connection with the recent automobile show. A 30 H.P. White touring car won the class for cars costing up to \$3500, and a 20 H. P. White touring car won in the \$2500 class. In the free-for-all, the same 30 H. P. car. with body removed, again triumphed. It made the climb in 1:38; which is to seconds faster than that made by its nearest competitor.

The superiority of the White in hill-climbing has been demonstrated in every public contest in which it has competed or, more properly speaking, been allowed to compete. climbing ability is the true test of real power, of available power, of power at the rear wheels, and it is evident that hill-climbing contests furnish the real demonstration of what the various systems of motive power can do, and that the tables of "rated horse-power" are of purely theoretical interest.

Write for Literature

THE WHITE COMPANY **CLEVELAND. OHIO**

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Chicago, 240 Michigan Ave. Philadelphia, 629-33 N. Broad St. Cleveland, 407 Rockwell Ave. Pittsburg, 138-148 Beatty Street.

The Matter of Safety

is often overlooked by automobile designers and results are often serious, sometimes disastrous. In the



this is considered an important detail and safety

of operator and car is given equal consideration.

A leading feature is the automatic spark retarder, by means of which engaging the starting crank positively retards the spark, thus removing all danger from premature ignition.

As to safety of the car, there is no greater source of trouble than loosened bolts or nuts.

In the Rambler this is prevented by the use of Rambler lock nuts that positively cannot come loose, or by castellated nuts locked in place by cotter pins.

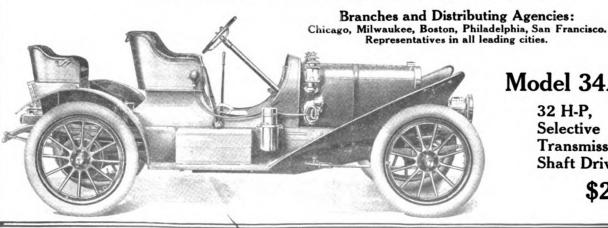
These are in themselves but small things, but it is such attention to little things that makes the Rambler

The Car of Steady Service

Our catalog tells the story. Write for it today or see our nearest representative.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin.



Model 34A,

32 H-P. Selective Transmission Shaft Drive

\$2,250.

Volume XVIII.

New York, U. S. A., Thursday, April 2, 1908.

No. 1

CHALFANT TO SUCCEED BUDLONG

Appointed Assistant General Manager of A. L. A. M., with Full Control— His Career in the Trade.

E. P. Chalfant has been appointed assistant general manager of the Association of Licensed Automobile Manufacturers and will assume the duties of the office on April 15th

Chalfant's appointment was announced immediately after a meeting of the executive committee of the association on Tuesday last and caused considerable surprise as his name was not among the many which had been mentioned in connection with the vacancy caused by the resignation of General Manager Budlong. In fact, owing to Chalfant's designation as assistant general manager, some doubt existed as to whether he was fully succeeding to Budlong's office. When a question to this effect was put to those in authority it brought this reply:

"Mr. Chalfant will have full control."

Like so many of those identified with the automobile industry, Chalfant graduated from the bicycle business. During later years he was head of the International Tire Co.'s sales department and for several years past and at the present time, he is sales manager of the Waltham Mfg. Co., whom he represented on the A. L. A. M. board. He is a large, serious man and has the reputation of being an earnest, painstaking worker.

Waterloo Cars Cooled on New Plan.

The Waterloo Car and Engine Co. has been formed in the Iowa city of that name with these officers: W. M. Law, president; E. P. Caldwell, secretary; H. B. White, treasurer. The company purposes building both automobiles and street cars which will be driven by gasolene engines the feature of which is "a new and improved means for cooling the cylinders." It is ex-

plained that the new method is "simply a combination of air and water"—very much less of water than now is usually used.

John Kane Mills Admits Bankruptcy.

John Kane Mills, president of the Dragon Motor Car Co., which recently went into the hands of receivers, last week filed a voluntary petition in bankruptcy in New Jersey, Mills being a resident of Morristown in that State. The difficulties of the company are said to be partly responsible for his failure. His liabilities are placed at \$292,851.08 and the assets at \$121,576. Of the liabilities \$141,701.35 are in secured claims and \$49,399.73 unsecured.

Three Companies Increase Their Capital.

Three concerns identified with the automobile industry have certified to increases of capital stock, as follows: Corbin Motor Vehicle Corporation, New Britain. Conn., from \$200,000 to \$500,000; Mason Motor Car Co., Des Moines, Iowa, from \$50,000 to \$100,000 and the Pennsylvania Rubber Co., Jeanette, Pa., from \$750,000 to \$1,500,000.

Trustee Sells Kansas City Plant.

The trustee in bankruptcy of the Kansas City (Mo.) Motor Car Co. last week sold the plant to F. E. Wear, who originally had sold to the company the twenty-seven-acre site on which the the plant stands. The price paid was \$47,000, enough to pay about 15 cents on the dollar to the creditors. A lot of machinery in the plant went for \$4,200.

Lightning Fires an Automobile Factory.

Lightning which struck the Port Huron (Mich.) plant of the Northern Motor Car Co. on Friday evening last, 27th inst., caused a fire which entailed damage to the extent of about \$10,000. The loss is fully covered by insurance.

Shoemaker Assets to be Sold.

The court has authorized the receiver of the Shoemaker Automobile Co., Elkhart, Ind., to sell the property at its assessed value, \$17.965.57.

MAY ORGANIZE TRAVELING SHOW

"Independents" Appoint Committee to Consider Gigantic Scheme—Outline Plan of a Three Months Tour.

Although it is stated that it does not necessarily imply that the association will not again join with the Automobile Club of America in promoting a show in New York City, "independent" show affairs took a rather unexpected and sensational turn at a meeting of the Committee of Management of the American Motor Car Manufacturers' Association, held in New York on Monday last, and while not officially adopted, a special committee was appointed to make a report at the next meeting. Briefly, the idea is that of a gigantic traveling show which will be carried half-way across the continent. Instead of asking people to visit other cities to see an automobile show, it is planned to carry the show to their towns during the selling season when people are ready to buy cars. Something of the same sort was undertaken a few years ago by an individual manufacturer, but the present plans call for participation by all the 52 members of the A. M. C. M. A.

The idea as outlined at yesterday's meeting, and which originated with Charles E. Lewis, of the Jackson Automobile Co., calls for a special train of thirty freight cars to carry the machines, and a train of Pullmans for the salesmen and demonstrators. The trip would last at least three months, a day or two being spent in each city having a population of more than 100,000.

If the plan is adopted, the start will be made from Detroit, thence going to Cleveland. Rochester, Syracuse. Utica and Albany. Following this route, the cities visited will include Springfield, Worcester, Boston, Providence, Hartford, New Haven, Bridgeport, New York, Newark, N. J., Atlantic City, Trenton, Philadelphia, Baltimore, Washington, Richmond, Charleston, W. Va., Pittsburg, Columbus, Cincinnati,

Indianapolis, St. Louis, Kansas City, Omaha, Des Moines, Minneapolis, St. Paul, Milwaukee, Chicago and Detroit.

With the participation of say fifty automobile manufacturers, with cars listing from \$500 to \$9,000, the pro rata cost would be very materially reduced, although the estimates furnished by the contracting agents of the railroads, indicate a total expenditure of about \$100,000.

Besides showing the cars, the scheme includes hill climbing and other contests to indicate the worth of the various cars.

At Monday's meeting of the Committee of Management there was a general discussion regarding trade conditions, while reports of a routine nature were heard. The proposed carnival in New York City was heartily endorsed. Those present at the meeting were: H. O. Smith, Premier Motor Mfg. Co.; G. V. Rogers, Mitchell Motor Car Co.; R. M. Owen, Reo Motor Car Co; C. C. Hance, Nordyke & Marmon Co.; W. H. VanDervoort, Moline Automobile Co.; S. H. Mora, Mora Motor Car Co., and Alfred Reeves, General Manager. In the absence of Benjamin Briscoe, chairman of the committee, H. O. Smith occupied the chair.

Jury Gives Dickinson \$19,000 Verdict.

After a trial lasting ten days, a jury in the United States court at Scranton, Pa., awarded Fred S. Dickinson a verdict of \$19,000 against the Matheson Motor Car Co. of Wilkes Barre. Dickinson claimed that he acted as agent for Charles R. Greuter in the sale of certain patents to the defendants, and that he was promised 40 per cent. of any sum that the sale realized. The defendants claimed that while Dickinson acted as agent for Greuter, in purchasing the patents, they eliminated the plaintiff in their calculations altogether.

Three Dixons Form Two Companies.

H. S., W. F. and E. M. Dixon, who have incorporated two separate International Motor Car Companies, one in Illinois, the other in New York, each capitalized at \$250,000, are said to be merely acting for other men. It is understood that the companies were formed to take over and operate the W. O. Worth patents which have been bobbing up periodically for several years and under which a number of friction driven trucks and busses have been built at Evansville, Ind., by the Worth Motor Car Mfg. Co.

Lausier Joins the Timken Staff.

Edwin B. Lausier has resigned as sales manager of the motor department. American and British Mfg. Co., of Bridgeport. Conn. He has accepted an important position with the Timken Roller Bearing Axle Co., Canton, Ohio.

Moon May Shine in New Place.

The Moon Motor Car Co. may remove from St. Louis to Detroit. Officers of the company say that they are considering a "flattering offer" but have not reached a decision.

In the Retail World.

The Hygrade Motor Car Co., Newark, N. J., has given up its garage at 11 and 13 Hill street.

C. A. Dundas has opened a new garage at 757 West Seventh street, Riverside, Cal. He will handle a California made car.

The garage of the Canada Cycle and Motor Co., 20-22 West Adelaide street, Toronto, suffered a fire on March 21st. The loss is placed at \$1,000.

D. M. Jackson is now the sole owner of the Warren Automobile Garage, Warren, Pa. Previously that garage was conducted by the firm of Jackson & Cross, but Cross has withdrawn.

Paul Melchart, of Pittsburg, has been in Wheeling, W. Va., for several days demonstrating the White car. The reason: The White Company will shortly open a branch there and Melchart will be in charge.

The Corn Belt Auto Co., of Waterloo, Ia., is expanding. A branch house will be opened at 324 South Main street, Mason City, under the name Mason City Auto and Supply Co. Frank W. Bryant will be in charge.

The Fred A. Mabbett Co., Rochester, N. Y., has consolidated with the United States Automobile Co., which latter title will be continued. The concern will handle the Pierce, Locomobile, Franklin, Selden, Stevens-Duryea, Cadillac and Oldsmobile.

F. J. Jastrin's automobile shop, on Exchange street, Freeport, Ill., is to be enlarged. The addition will be a two-story, 40 by 60, structure of brick, with concrete floor and unobstructed by posts or partition walls. It will be used as a garage. The contract price is \$3,000.

Webb Jay, the former well known race driver of the White, now in business in Chicago for himself, has added another car to his list. He will be agent for the Acme, in addition to the Kisselkar, and the Webb Jay steamer. It is stated that his company has been reorganized and capitalized at \$500,000.

The Hayes Rubber Co., which recently set up a tire and supply store on Warren street, New York, has for its treasurer and backer none other than David Grinberg, who is one-half of that peculiarly interesting firm, Grinberg & Morris, who prefer to trade under the title Manhattan Storage Co. and other names. Many things in the Warren street establishment indicate that Grinberg influence is both active and strong.

The Week's Incorporations.

Milwaukee, Wis.—Haines Motor Co., The, under Wisconsin laws, with \$10,000 capital. Corporators—Samuel J. Haines, William E. Brown.

Kankakee, Ill.—International Motor Car Mfg. Co., under Illinois laws, with \$250,000 capital. Corporators—W. F. Dixo., H. S. Dixon, E. M. Dixon.

New York City, N. Y.—International Motor Co., under New York laws, with \$250,000 capital. Corporators—W. F. Dixon, H. S. Dixon, E. M. Dixon.

Stamford, Conn.—United Motor Car Sales Co., The, under Connecticut laws, with \$5,000 capital. Corporators—W. H. Taylor. W. E. Scofield, John L. Judd.

Robinson, Ill.—Bessemer Gas Engine Co., under Illinois laws, with \$200,000 capital; to deal in engines and machinery. Corporator—H. B. Willower, Robinson, Ill.

Tenafly, N. J.—Tenafly Auto and Supply Co., The, under New Jersey laws, with \$3,000 capital. Corporators—H. LeRoy Demarest, Clifford Demarest, J. E. Tuttle.

St. Louis, Mo.—Gardner Motor Vehicle Co., under Missouri laws, with \$75,000 capital; to manufacture and deal in automobiles and supplies. Corporators—John W. Gardner, E. T. Jones.

Brooklyn, N. Y.—Modern Automobile Co., under New York laws, with \$3,000 capital. Corporators—Leonard Vielbig, 238 Grove street; Charles C. Limbarth, 529 Monroe street; Henry Delle, 84 Bleecker street, Brooklyn, N. Y.

New York City, N. Y.—Securo Mfg. Co., under New York laws, with \$25,000 capital, to manufacture automobile parts. Corporators—Raymond Magee, Charles B. Young, and Henry S. Reynolds, 111 Broadway, New York City, N. Y.

Somerville, N. J.—E. W. Stevens Co., The, under New Jersey laws, with \$200,000 capital; to manufacture vehicles, engines, etc. Corporators—E. D. Cronin, Brooklyn, N. Y.; F. Knowlton, New York City, N. Y.; R. H. Osgoodby, Somerville, N. J.

·Wilmington, Del.—Auburn Motor Car Co., under Delaware laws, with \$10,000 capital. Corporators—Frederick Liebfried, Jr., 503 Chestnut street, Philadelphia, Pa., Howard W. Trump, Jenkintown, Pa.; M. G. Ryan, 910 Spruce street, Philadelphia, Pa.

New York City, N. Y.—Senate Motor Car Co., under New York laws, with \$100,000 capital. Corporators—Albert W. Meisel, 5 Beekman street; Frank O. Fuller, 522 West 147th street; Christopher B. Craske, 106 West 78th street, New York City, N. Y.

Motor Buggy Makers Go Under.

On the application of the F. A. Austin Pattern Co., whose claim for drawings and patterns amounts to \$550, W. R. Craven has been appointed receiver for the Hatfield Motor Vehicle Co., Miamisburg, Ohio. The concern undertook to manufacture motor buggies but did not make any considerable progress.

Spier Quits Cars for Bearings.

John C. Spiers, manager of the Autocar factory, has resigned that position to become factory manager of the Standard Roller Bearing Co., Philadelphia. Spiers has full charge of the manufacturing department of the latter concern.



SHRINKAGE IN FEBRUARY EXPORTS

Lessened by Notable Gains in Six Geographical Divisions — Mexico Makes Biggest Cut in Figures.

During the month of February 151 complete automobiles, worth \$301,240, and parts to the valuation of \$47,124 were exported from the United States, the total representing a depreciation of \$95,340, in round numbers, over the corresponding total of 1907. The loss is mainly in the value of complete cars, of which 213 were exported in February, 1907, the decrease in valuation of parts exported amounting to less than a third of the total depreciation.

The loss was made in the face of notable gains in the case of 6 of the territorial divisions of the export field, however. Italy, the United Kingdom and the group classed as Other Countries led in this counter movement with gains of \$33,500, \$27,300, and \$11,900 approximately, in the order named. Of the countries displaying less interest than heretofore in the American product, Mexico took the lead with a falling off of no less than \$82,507, West Indies and Bermuda, British North America and British Australia following with \$44,200. \$31,100, and \$11,300 roughly speaking.

For the eight months ending February 29th, a gain of \$188,577 over the corresponding returns for last year was developed. Only 1,518 cars were exported, as against 1,582 last year, their combined value, however, showing an increase of \$220,841. The valuation of parts, however, revealed a decline amounting to \$32,264. Of the eight countries showing improved markets for this period, the United Kingdom, with \$363,-582, France, with \$100,990, and West Indies and Bermuda and South America, with \$38,000 and \$36,000 nearly, following. Losses were evidenced in the case of Mexico, which fell away to the extent of \$273,-674, British North America, and British Australasia, with losses in the two latter instances of \$57,667 and \$43,886, respectively. The report in detail follows:

Where Prosperity is at High Tide.

With orders on their books sufficient to keep their plant running for the next 18 months, the Continental Motor Mfg. Co., Muskegon, Mich., have let contracts for the crection of a new machine shop, 110 by 175 feet, which will be ready June 1st. building will be of one story, absolutely fire proof and saw tooth roof construction. The Continental people intend to place their present machine shop equipment in the new building and are also making extensive additions and increases to their machine tool equipment comprising the latest and most modern machinery for accurate and precise work; most of these machines are automatic and are built specially for their use.

The Continental company have just completed a large motor testing house which is also fire proof and which they claim to be the largest and best equipped in the country for that purpose, there being capacity for testing 50 finished motors at one time. The proposed addition is the fourth enlargement of their plant, which has been made since they located in Muskegon less that two years ago, since which time the company had added motors for taxicabs and commercial vehicles and for a variety of uses foreign to automobiles.

Drops the Count and Takes up Plows.

Count Manuel de Caserta, who was seeking a site for a De Dion-Bouton factory in this country, and about whom some unpleasant stories cropped out, has dropped out of the enterprise, which it seems has not been abandoned. The count has been succeeded by W. J. Plows, Jr., of New York, and the industrial department of the Delaware & Hudson Railway still is making efforts to have the projected factory located on its route in New York State.

Big Business in Bosch Magnetos.

There is nothing the matter with the demand for Bosch magnetos. During the week ending March 14th, the Bosch Magneto Co. report the sale of exactly 4,970 of their instruments, and add that they are now over 1,000 behind orders.

•	←Feb 1907	ruary 1908	1906	onths Ending 1907	g February 1908
Automobiles and parts of Automobiles*	\$368,309	\$301,240 47,124	\$1,771,313	\$2,471,859 401,387	\$2.692.700 369,123
Exported to— United Kingdom France	100,065 33,942	127,356 38,371	471,017 123,191	663.023 211.605	1,026.605 312,595
Germany Italy	4,136 30,278	155 63,782	35,329 131,210	71,807 99,103	80,898 107,234
Other Europe British North America Mexico	18,926 75,266 96,262	15,131 44,152 13,755	90,252 284,623 166,510	106,687 571,360 561,335	98,453 513,693 287,661
West Indies and Bermuda South America	58,366 6,260	14,158 4,251	210,428 48,041	158,409 137,641	196,677 173,599
British East Indies		1,241 3,774 9,392	28,364 118,846 30,910	21,325 184,678 69,476	20,598 140,792 76,355
Africa	1,153	36 12,810	20.875 11.717	8,555 8,242	6,636 20,027
Total automobiles and parts of	\$443,703	\$348,364	\$1.771.313	\$2,873,246	\$3,061,823

^{*} Number not stated prior to July 1, 1906.

RECEIVERS ARE NOT REMOVED

Toledo Effort to Oust Pope and Yule Fail of Their Purpose—But Third Receiver is Named.

As a result of the hearing on the two motions filed by Toledo interests which had for their object the removal of Albert L. Pope and George W. Yule as receivers of the Pope Motor Car Co., neither of them were removed. Instead, a third receiver, F. A. Scott, secretary of the Superior Trust Co., of Cleveland, was appointed, with special reference to the guarding of the Pope-Toledo interests.

The case was heard on Friday last, 27th ult., by Judge R. W. Taylor, sitting in the United States court at Toledo. It was notable for the great array of legal talent that was brought to bear, the petitioning creditors being represented by three attorneys and Receivers Pope and Yule by four.

The declaration was made by one of plaintiff's lawyers that at the time a receiver was asked for the Pope Mfg. Co. and the Pope Motor Car Co., the claims against the latter company did not aggregate more than \$800, while the claims against the Pope Mfg. Co. amounted to more than one million dollars.

Other attorneys representing the creditors declared that the interests of Receivers Yule and Pope centered so strongly in the Pope Mfg. Co. that they would not be likely to give the creditors of the Motor Car Co. an impartial deal. It was also claimed that the parent corporation had drained the resources of the local plant without right.

After hearing the arguments, Judge Taylor said that while Receivers Yule and Pope might be valuable, it was plain they could not represent both sides and that he would appoint a third receiver.

The selection of Mr. Scott was announced later, and is said not to have been wholly agreeable to the Toledo people who had hoped for the appointment of a local man. It was indicated by the court that the duty of the third receiver would be to guard the interests of the creditors in the local plant and especially the claim of \$800,000 which Albert L. Pope has against the Pope Motor Car Co.

Detroit Dealers Re-elect Old Officers.

At its annual meeting attended by every member, the Detroit Automobile Dealers' Association re-elected all the old officers, as follows: President, A. I. McLeod; vice-president, J. P. Schneider; treasurer, J. H. Brady; secretary, George E. Lane.

Hardy Locates on Forty-second Street.

The R. E. Hardy Co., the spark plug manufacturers, have removed from 86 Watts street to 25 West Forty-second street, New York.



S T O

RES

TRY MILLER

This expression has developed into a trade term

THERE'S A REASON

The public, which in the past, has experienced difficulty in obtaining automobile supplies should give us a trial, by mail, or a personal visit.



We Carry in Stock the Largest Assortment of PARTS, FITTINGS AND SUNDRIES
To be Found in this Country

Our Catalog, the most complete one of its kind, is an encyclopedia of motor car supplies; it is used daily by other supply houses and they could not get along without it. A copy mailed to any one on request.

Order from nearest Branch and save time and express charges.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE: 97-99-101 Reade Street,

NEW YORK CITY

S T O

R E S



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

Eff Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 2, 1908

About Fictitious List Prices.

It is becoming quite apparent that in the readjustment that is taking place in the automobile industry, there is crying need for readjustment of the prevailing prices of accessories. Those in position to know are well aware that in certain parts of the country conditions have arisen which have led to cut-throat competition on the part of the retail trade, while in many more places dealers simply cannot be induced to "stock up." They are "standing pat" or purchasing only to meet immediate requirements. As a result few of those who have to do with accessories are wholly happy.

It is a situation due largely to adherence to what may be termed "prosperity prices," which is but another term for "fancy figures" and fictitious lists. The time when possession of a motor car places a man in ures" and fictitious lists. The time when with the small car is cutting an increasingly larger figure in the industry and as small cars are not usually noted for a wealth of equipment, the size of his purse must be reckoned with for he is in many respects the most likely buyer of accessories, that is, when they are placed within his means.

The fictitious price never can endure and the manufacturer who forces himself to believe to the contrary rarely fails to encounter a day of reckoning which brings with it a rude awakening. Generally speaking, fictitious list prices prevail throughout the accessory trade. They were made to assure handsome profits to every person engaged in their sale. They were made to be handed down through a long line of middlemen. One of the purposes they have served has been to attract and enrich a not small number of nimble-witted merchants who consider that prices are made only to be cut, and so great is the tendency toward inflation that even these merchants do not scruple to add a dollar or two to prices in order to make their "discounts" appear the larger. The merchant whom we style legitimate has been the chief sufferer. Patronage simply has flown past his door. Such inflated prices have served their purpose and it were well that the fact be recognized before it is too late.

It requires no great perspicacity to discern that an article listed at say, \$62, which is sold to an automobile manufacturer for say \$22, and at the latter price nets a profit to the producer, is a "fancy price." The same is as true of the article which is catalogued at \$1.50, and which can be sold by the jobber at a good profit for 60 cents. Inconsistencies of the sort are the rule rather than the exception and the time has come when they no longer promote sales, but retard them. The fact that even the Automobile Club of America has instituted a cut-price store is a straw which shows which way the wind is blowing. It indicates that even the men of means are rebelling against the enforcement of "pros-There are jobbers who perity prices." freely admit that profits are mischievously disproportionate. There are dealers who not only admit it, but who have taken the bull by the horns and are measuring for themselves the size of the profit they consider fair. They are sharing with their customers when they are not refusing to "stock up."

Early in the season, one of the astutest men in the whole industry sized up the future as being one of unusual promise for the accessory people. He said in substance that however the year might pan out for the automobile manufacturer, the signs pointed to a volume of replacements which assured prosperity for the producers of accessor-It was the soundest of many forecasts that were presented. going awry not because of faulty sifting of evidence, but because the inevitable effect of the fictitious price is making itself felt. There are some things which automobilists must have, and must pay for; there are other things which they would have but can do without, and they are doing without them solely because the wisdom which comes with age and experience has taught them that there is "something wrong with the price." The indications that exist are plain even to those who are most affected and to close their eyes to the truth simply is inviting stagnation or commercial suicide.

The Motor World is well aware that prices and profits constitute a tender subject for discussion, but it is not its policy to blow colored bubbles that the trade shall be assisted in deceiving itself. The situation in the accessory market is one that calls for plain speech, openly expressed, before the mischief, already started, shall get beyond control. A readjustment of prices is necessary and without undue delay.

The Perfection of the Whole.

As a result of the intimate relationship between all the parts of the motor car, it happens that no effect can be produced except at the expense of all or nearly all of them, even though many of organs seem not to be in the least involved. Thus the very act of propulsion, though apparently confined solely to the power plant, is made possible only by the resistance of such other parts as frame, springs, axles, steering gear and even of the body as well. Nor are the resistances in question those to which the parts are nominally subjected in bearing the dead weight of the vehicle, but additional stresses due solely to the driving power of the motor. The average motorist, and, it is to be feared, the average designer also, has been slow in getting away from the idea that the only strains to which the machine is subjected are those due to the apparent purpose of every part, plus a substantial addition in the case of points supposed to be vulnerable to road shocks.

Before the bicycle could reach its present state of mechanical perfection, it was necessary to learn that no part was indis-



pensable, that none could be superfluous, and that none could be skimped or slighted in the making, if a successful and substantial product was expected to result. Ultimately the motor car will have to be considered on this exacting basis and no part neglected in a close scrutiny the object of which shall be to determine the absolute suitability of every part for its place. A readjustment of values must take place before the entire vehicle may be expected to evidence a uniform degree of endurance in all its parts. It is not simply neglect that causes cars to fail in one particular respect during any given season, or for several seasons in succession. Rather it is apt to be ignorance on the part of the designer of the real causes of the difficulty.

Radius rod design and spring motion have not been commonly considered as factors in any way governing tire wear. Yet that such must be the case in certain instances, at least, has been demonstrated. The effect of spring motion on the steering gear, to take another example of apparent irrelevancy, or the effect of engine torque on spring wear, for still another, or again, the effect of spring motion in the wear of gear teeth in the transmission—these and a dozen other instances which readily come to mind are cases of direct relationship which, because of differences in nominal purpose, are lost to view in many cases, or guarded against almost blindly, with a convenient factor of safety.

Motor car design, in its best and most useful stage, must come to be admitted as one of the most successful exploits of engineering skill ever undertaken. It is not so recognized at present, nor will it be wholly successful until such recognition is afforded it. The man who has attempted to design a car comes to have a profound respect for it—not as the work of his hands, but as a problem. At present he is practically alone in holding that opinion. Later, the enormity of his task may be better and more generally understood.

Where Light is Wanted.

Unless he is more circumspect in his picturesque straddle of the issue, Prof. Schwarzkopf may not only sell Poobah Shattuck one of his ten dollar books but the poobah is as likely to propose him for membership in the Automobile Club of America as he unproposed him several sad years ago.

Despite the fact that the professor's foreign blood is the genuine article and the poobah's red circulating medium is merely imported and was injected by inspiration, it is not strange that their hearts occasionally should beat almost as one; for truly blood is thicker than gasolene.

But for the benefit of obtuse Americans, the professor should submit diagrams showing wherein a house divided against itself is stronger than the undivided house, and wherein an organization working for itself or for one community and which in doing so is pulling against all other organizations and all other communities, is serving the best interests of the cause for which it stands. Diagrams of the sort would quicken the sale of any book.

Prof. Schwarzkopf, whose say-so always is perfectly lovely, would further add to the blithesomeness of Spring, by pointing out not the unsnakeishness but the graciousness and other beauties of "good wishes" in which is artfully concealed a dose of poison bearing the plain but unwritten label, "We hope you choke."

In fact, nothing would serve so very many peculiar purposes as an essay from a Schwarzkopfian pen discussing thoroughly the advantages of co-operation which does not co-operate and of the admirable qualities of a large, domineering gentleman with a gorgeous beard that would make even Van Dyke envious, who, when he discovered several other large gentlemen, unhappily devoid of beards, who refused to be domineered, decided to shoot marbles all by himself in his own back yard. Who better could write such an essay than a professor of biography?

According to his press bureau, Chairman Hower of the A. A. A. Touring Board is little short of a god on pneumatic tired wheels. Although this opinion does not wholly agree with the sentiments of all who participated in the last Glidden touring contest, it may be true for all of that. Among other things, it is stated that in formulating the new rules, the doughty chairman has answered every criticism and corrected every fault, which is in the nature of cheering news. It will cause the rules to be awaited with keen interest. It will be interesting, for instance, to observe whether, with a fat surplus on hand, Mr. Tower and his committee still will require an entry fee of former proportions and whether there is to be repeated that silly procedure of permitting contestants to come within a few yards of controls and remain, watches in hand.

COMING EVENTS

March 31-April 4, Salt Lake City, Utah—Automobile show in Auditorium skating rink.

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

April 6, 7 and 8, Denver, Col.—Annual show in Mammoth skating rink.

April 6-11. New York City—New York Automobile Trade Association's carnival week.

April 11, San Francisco—California Automobile Dealers' Association's hill climb.

April 16-18, Memphis, Tenn.—Automobile show promoted by the Automobile Dealers' Association of Memphis, in the Auditorium.

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

May 5-6, Harrisburg, Pa.—Motor Club of Harrisburg's second annual endurance run.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

until the proper moment for crossing the line arrives; also whether Mr. Tower will be again privileged to change a route if he sees fit and whether a schedule arranged for fair weather will be made to serve as well for foul.

It may be unconstitutional for Congress to pass the bill designed to provide a Federal license, but for the first time the fact will occur to many men that a constitution is sadly in need of tinkering which permits 46 different parts of the same country to exact passports and admission fees from certain citizens of each other part who are supposed to be citizens of the whole country. The average American has been disposed to fancy that that sort of thing could exist only in Russia.

Senator Frelinghuysen, of New Jersey, whose home is in New York, has introduced a bill into the legislature of the State in which he does not reside, designed to permit insurance companies to insure automobiles. Mr. Frelinghuysen's office—in New York, of course—is part of an insurance company's establishment!

INDIANAPOLIS CARNIVAL A SUCCESS

Postponed Parade a Monster Demonstration of Progress—Thousands Amused by the Obstacle Races.

Although the hill climb on Tuesday last was a big success, the postponed parade on Wednesday afternoon, 25th ult., was the star feature of the spring opening week arranged by the automobile tradesmen of Indianapolis. It was the greatest automobile parade ever held in the city. From two until three o'clock almost the entire city stopped work to witness the procession of cars that strung out for six blocks. The parade was designed to evidence the continued growth of the trade and it served its purpose well. The parade should have opened the spring carnival on Monday, but on account of expected rain, which did not fall, it was postponed until Wednesday.

The parade was the biggest demonstration witnessed in Indianapolis in some time. It absorbed the attention of the whole downtown district and was watched by from 50,000 to 100,000 people. By actual count 225 cars were in line, separated into three divisions. The first was composed of cars of the city, led by city officials and dignitaries. The middle division was made up of commercial vehicles, while out-of-town cars brought up the rear.

One of the odd features of the parade. and one that had historical interest because it reflected back on the days when the lumbering ox team dodged stumps in the National road, was the ox team outfit representing the National Furniture Co. The firm called it the "special horseless delivery." The interesting exhibit proved in the nature of an object lesson to the thousands of school children who witnessed the parade, for they see thousands of automobiles at the present time while few of them have seen an ox team actually in commission. The oxen and automobiles told a story of American progress in transportation.

The obstacle races on Thursday afternoon furnished considerable amusement to the 3,000 or more spectators that lined both sides of Capitol avenue. Both obstacle races-for touring cars and runaboutswere designed to test the skill of drivers in "ticklish" places. About 200 barrels were set in every conceivable position along the avenue and the competitors had to drive one block, turn around and go back to the starting point. Each barrel hit counted 20 points off a 500 per cent. score, and each second over 100 seconds counted one point against the contestants, as well as one point for every second less than 100 seconds, so that the events proved speed judging contests as well as obstacle races.

There were only two runabouts that did not touch a barrel, those being Bixby's

Pope-Waverly and Chilson's Autocar. Bixby was awarded the event as he made the better score on time. Of the touring cars, Hicks, Cartercar, made the best score.

Cecil Gibson, Ford, won the egg cracking contest, although it was a close break between him and Adolph Staub in an Oldsmobile. The driver had to send his car over a two by four scantling, crack an egg and return without crushing the egg. Gibson showed that he had the best control and backed off the egg just before the chicken squawked.

The low speed on high gear contest was won in slower than a walk by Frank Staley, White, who took 2 minutes 56½ seconds to cover one block. Harry Hammond, Premier, was second in 1:47½. This event was a revelation to the Indianapolis police officials who had no idea that an automobile could go so slowly and still keep moving.

The "open house week" closed on Saturday night with a big smoker at the Grand and although no figures are forthcoming it is said that the carnival proved very profitable to the tradesmen, to such an extent, in fact, that they are talking of holding a big indoor show next year.

The Center of Attraction at Toledo Show.

Toledo dealers held their second annual show in the Coliseum in that city last week, opening on Monday night, 23d inst. For several days the exhibit that drew the largest crowds was that of the Central Carriage and Automobile Co., not that the cars shown by that concern were any better than some others, but because the Toledo papers had advertised a popular car for sale at \$8.25. This unheard of price nearly caused the manager nervous prostration until he discovered the typographical error in his advertisement was the cause of such unlooked for interest in his exhibit. The cars shown at the show were: White, Mitchell, Maxwell, Cadillac, Franklin, Pope-Waverly, Stoddard-Dayton, Jackson, Ford, Reo, Pope-Toledo, Peerless, Winton, Oldsmobile, Rauch and Lang and Baker.

Dayton Dealers Have the Show Fever.

Dayton, Ohio, will have an automobile show in the Armory during the week of April 20 to 26, to promote which the Dayton Automobile Dealers' Association has been formed. The following officers were elected: President, G. G. G. Peckham; secretary-treasurer, A. M. Dodds. The firms comprising the association are the Dayton Automobile Co., Peckham Carriage Co., Borderwisch Auto Co., Smith-Clemens & Hopping, and the Speedwell Motor Cor Co

First Show Held at South Bend.

South Bend's (Ind.) first automobile show was held in the garage of the Twentieth Century Motor Car Co. on Thursday, Friday and Saturday of last week, March 26th to 28th. The cars shown were the Studebaker. Buick, Tincher, Perfection, Simplex, Oldsmobile, Rapid, Woods and Apperson.

CARNIVAL SPIRIT IN NEW YORK

Interest in the Coming Joy Week on the Increase—Program of Features in the Celebration.

There is every prospect that when on Monday next, 6th inst., New York City will begin its celebration of the tenth anniversary of the introduction of automobiles into the metropolis that the "carnival week," arranged by the New York Automobile Trade Association, will prove a more momentous occasion than originally appeared probable. The program arranged, which will include a night parade, a hill climbing contest, a run to Bronxville, and a smoker for members and the trade participating in the carnival, holds much of general and spectacular interest and as the major events constitute a "free show," the public scarcely will fail to do its part in great numbers.

It is expected that the city's "automobile row," as a considerable length of Broadway is designated, will present a carnival aspect. Several of the sales rooms are preparing to spread themselves in the way of decorations, while "open house" will be observed in all the sales rooms and garages during the week.

The illuminated parade on Tuesday night should prove a pretentious affair with its five divisons, composed of Vanderblt cup cars and historic section of old cars; dealers' 1908 models, decorated cars, commercial vehicles, and lastly, the division composed of advertising features, which division is likely to provide a number of eyepleasing surprises.

The parade will assemble at Broadway and Fifty-seventh street, at 7.30 p. m., proceeding south to Twenty-sixth street, thence into Fifth avenue and north to Fifty-seventh street, going west up Broadway to 110th street, passing in review before the judges' stand at Eighty-seventh street. The procession will turn at 110th street, and proceed south to Columbus circle, where it will disband.

The hill climb is made up of eleven events and will be held on the short 10 per cent. Fort George hill at Dyckman street, and the Speedway on Thursday afternoon, permission having been granted by the city officials for the use of this course. This will be the second time the course has been used for a hill climb.

On Friday the Trade Association will hold a run to the Gramatin Inn at Bronsville, where a dinner will be held in the evening, while the entertainment of the Automobile Club of America has arranged for a "carnival" to be held at its club-house Saturday night. In addition to an attractive vaudeville program some numbers will be contributed to the program by members of the trade, who have been invited to participate.

FRELINGHUYSEN BILL ON ITS WAY

Jersey Senate Passes It with Proposed Taxation Reduced—Bill in Assembly Extends the Speed Limit.

Senator Joseph S. Frelinghuysen, of New York City, by choice, but of New Jersey by political preference, is as happy as possible under the circumstances. His revised automobile bill passed the New Jersey Senate on Monday night of this week, 30th ult., which by a peculiar coincidence, was the day previous to the meeting of the Associated Automobile Clubs of New Jersey.

If the Assembly concurs, the registration fees will be raised from the present rate of \$3 for vehicles below 30 horsepower and \$5 for those above 30 horsepower, to \$3 for cars below 10 horsepower, \$5 for those between 10 and 30 horsepower, and \$10 for those of 30 horsepower or over. It increases the drivers' licenses from \$1 and \$2 to \$2 and \$4. In the original draft, introduced as an amendment to the present law, Frelinghuysen sought to raise the registration fees on a sliding scale-\$3 for cars of 10 horsepower or less, \$5 for cars of 20 horsepower or less, and upjumps of \$5 for each additional horsepower. Likewise were the drivers' license fees increased proportionately from \$1 and \$2 to \$25. As the Motor World stated last week the "come down" is of considerable magnitude.

Provision is made for licensing by blanket license cab companies operating adjacent to ferries, provision being made that they shall operate only within fifteen miles within the borders of the State.

Manufacturers' licenses are to be issued annually at a cost of \$25 for five cars, according to the provisions of the new bill, but not more than five cars can be operated under one license. If it is desired to register more than five cars the fee will be \$5 tor each car so registered. The original new bill did away with manufacturers' blanket licenses. Motorcycles are to be taxed \$2 per year and carry such identification marks as may be prescribed by the Commissioner of Motor Vehicles.

It is provided that all identification marks shall be provided by the State, and be changed annually; also, that the receipts from all sources shall be so distributed by the Commissioner of Public Roads that those counties that have improved their roads by the county act shall receive their pro rata share with those that have been improved by the State roads act. Nothing is in the new measure to prevent the charging of visiting motorists an admission for to use the public highways of New Jersey, which however, Senator Frelinghuysen does not have to pay, as he issues his correspondence on a letter head bearing a New Jersey date line, although he purchases his stamps in New York City, where he resides.

THE MOTOR WORLD

Senator Frelinghuysen also introduced a bill on Monday, amending the insurance act permitting the organization of companies to insure against loss by automobile accidents.

Despite the passage of Frelinghuysen's revised bill by the Senate, the situation has become even more complex by the introduction of another automobile bill in the Assembly, one which increases the present maximum speed limit of twenty miles an hour to thirty miles and hour. Its sponsor is Representative Austen Colgate, and as he has been made a colonel and personal aide on the staff of Governor Fort, it would seem that the bill designed to permit a higher rate of speed has the endorsement of the governor.

Monday was an unusually busy day at the New Jersey capital. In addition to the passage of one Frelinghuysen bill and the introduction of another, J. B. R. Smith, Commissioner of Motor Vehicles, submitted his annual report to the governor for transmission to the legislature. That Commissioner Smith is not in favor of experimenting with present automobile laws was made plain. He believes that until some substantial agreement between the persons interested can be reached, it would not be sound policy to experiment further.

The report of the commissioner is interesting. It shows that during the past year there were issued 17,619 registration certificates and 18,085 drivers' licenses. The total income from these sources amounted to \$80,054.87. The fines remitted to the State during the year aggregated \$5,640. The total amount paid to the State treasurer was \$85,694.87. The entire expenses of the department, exclusive of agents' fees, were \$13,372.60. Under the law the gross receipts from all sources are turned into the State treasury, to be paid out upon the designation of the commissioner of public roads for the repair of the improved roads of the State, and the entire expenses of maintaining the department are borne by the Department of State.

The commissioner predicts that time and experience will result in concrete, practical suggestions for solving automobile problems, and goes on to say:

"The few points upon which substantial agreement has been reached are well understood. The question of fees paid for licenses and registration appears to be nearing solution, and there seems to be a general agreement that larger fees should be paid. The amount of the increase, however, is still a matter of serious consideration.

"Proper identification is the keynote to all efficient regulation, yet such identification should not be made unduly burdensome. The real value of the law must, in the end, depend upon the efficiency of those whose duty it is to enforce it. The final solution of both the identification and the inspector questions will doubtless be reached by easy stages."

COEY OUITS CHICAGO MOTOR CLUB

Not Big Enough to Hold Both Him and Picard, He Says—Cause of the Latest Quarrel.

C. A. Coey and Paul Picard have been fighting again. After being whitewashed of charges preferred by Picard, Coey has tendered his resignation as a member of the Chicago Motor Club, explaining that no club is large enough to hold Picard and him as members. This is not the first "fight" that Picard and Coey have indulged in to the amusement of Chicago's motor tradesmen, but without resulting in such hostility as preceded this action on Coey's part.

The charges and resignation are the outgrowth of the New York-Paris "race" and the reception of the competing cars in Chicago. Coey, as a member of the Thomas crew, according to the charges of Picard, declared that the Thomas had been sent over the wrong road from Michigan City to Chesterton, Ind., by Picard, representing the Motor Club, who had gone as far as Michigan City in his efforts to meet the racers and to pilot them into Chicago.

The Thomas car was stalled in the drifts between Michigan City and Chesterton two days and attributed their trials and tribulations to the failure of Paul Picard to transmit information about the condition of the roads, holding that they should have been sent via Furnaceville. Coey aired his grievances against Picard as a member of the Motor Club in advertisements, and the charges before the board of directors of the club resulted.

David Beecroft presided at the special meeting called to hear the charges and with him were George Greenburg, Harry Branstetter and Joseph V. Lawrence. President Donald was present by proxy. Coey was attended by Attorney Benjamin Levering and Charles E. Gregory. Paul Picard was unattended, claiming that he was uninformed of the trial and therefore unprepared.

Picard was the only witness called, and his explanation that he had not been informed of the trial resulted in considerable feeling being displayed by members of the directorate, sitting as judges. Branstetter brought matters to a climax by withdrawing from the meeting and the others voted to dismiss the charges "because of failure on the part of the prosecution to present sufficient evidence, but with the privilege of reinstatement."

The failure of Paul Picard to produce the advertisement upon which the charges were based was really responsible for the indecisive ending of the hearing. Immediately upon the decision, acting through Attorney Levering. Coey presented his resignation, explaining that no club was large enough to hold him and Picard as members.

BRISCOE SAYS BUSINESS BOOMING

Actual Deliveries 50 per cent. in Excess of Last Year—His Views of Past and Future.

"We are reaping the reward of faith," said Benjamin Briscoe, president of the Maxwell-Briscoe Motor Co., in discussing the present situation. "The Maxwell factory has not laid off a man all season, but on the contrary has been working to capacity during the past few months of business depression, while other factories either

for delivery early—a most important advantage to be gained over those of our competitors who were standing idle or undecided as to what to do. Then I figured that, as almost all other factories had cancelled orders for material—indicating that they would turn out only about half as many cars as we had previously estimated they would—there would be still more room—and more demand—for Maxwells. So we increased our output 25 per cent.

"Our faith is being rewarded in a way that surpasses our fondest hopes. Our sales since August 1st show an increase of 42 per cent. over those of the same period last year and those of January, February,



SCUDEBAKER ELECTRIC AMBULANCE SUPPLIED TO FEDERAL GOVERNMENT

closed down entirely or worked a short force.

"That we not only did not curtail our output but actually increased it over our original schedule was due to our unbounded faith in the stability of the country and of the automobile industry—at least that part of it engaged in the production of moderate priced cars—and that we have been unable to accumulate a single car against the heavy Spring demand is proof that our optimism was justified. Ordinarily, we plan to produce several hundred cars over the delivery demands in the months from November to March, but this season we have been hard pressed to keep up with current orders.

"At the time when the breaking of a few banks threw some of our competitors into a fit, and pessimism was rife, I looked the situation over and came to the conclusion that that was our time to make a ten-strike. I was certain of the ultimate recovery of trade and I believed the period of depression would be short-lived. On those grounds we determined to push work in all four plants so as to have Maxwell cars ready

and March surpasses last year by 50 per cent. When I say sales, I mean deliveries—not merely orders. Seems as if this showing gives the lie to the too general supposition that the automobile industry is to suffer more than other branches of commerce from the temporary depression. For my part I predict that the total business of 1908 will exceed that of 1907 by greater or as great a margin as that of 1907 was in excess of the year before. In other words, I believe the automobile has become a necessity in the every day life of practically every successful business and professional man."

Uncle Sam Buys Another Ambulance.

The Studebaker Automobile Co. recently delivered to the Medical Department of the United States Navy at Washington, D. C., a handsome electric ambulance. The body, which is of the special design shown by the accompanying illustration, is fitted upon a regular Studebaker 1500 pound capacity chassis. The ambulance has a speed of twelve miles per hour and a radius of forty miles on one charge of the battery.

OLDS REPORTS RUSH OF ORDERS

Business Away Ahead of Last Season and No Let-up in Sight—His Opinion of Situation.

"We already have received orders for five hundred more cars than the 1908 contracts made with our agents called for, many of which dated as early as last September, when there was no indication whatever of a money scare," says R. E. Olds, president of the Reo Motor Car Co.

"Confronted with this condition, and with orders coming in constantly from new and unexpected sources in every section of the country, we have been obliged to very materially increase our capacity for the building and shipment of Reo cars. Our factory employes now number 1.100. These have worked steadily all winter, and now we are employing additional men in order to make good absolutely our positive guarantees of prompt deliveries.

"These facts fully justify the extensive plans which we laid earlier in the season. It will be recalled that we announced to our dealers and to the trade in general, when the money scare was at its height in October, that there would be no halt in the Reo factory, but that it would continue to build cars up to its maximum capacity. We believed then, as we do now, that the causes which led up to the recent industrial upheaval were not fundamental, for no material changes had been wrought in our governmental policies, state or national. Having undergone the period of recuperation and readjustment which was but a natural outcome of the many excesses and extravagancies to which, we, as an abnormally prosperous nation had permitted ourselves to get into, the business pendulum has been steadily swinging toward the normal. The recuperative process, like recovery from a severe nervous shock, has necessarily been slow, but has been as certain as sunshine follows showers.

"Our last November and December shipments far exceeded those of any previous year. January and February shipments were equally gratifying. The result is that we have not only sold every car contracted for when prosperity was at its height six months ago, but our factory is now actually being crowded to supply the scramble for high-grade, moderate priced cars, which we fully anticipated months ago would follow the temporary period of adjustment."

Automobile Ambulance for Kings County

The New York branch of The White Co. has recently sold an ambulance to the Kings County Hospital of Brooklyn. The ambulance consists of a standard 30 horsepower chassis with a body similar to those of the ambulance previously furnished by The White Co. to the Federal Government.



BIG CROWD AT ATLANTA HILL CLIMB

All the Events Closely Contested and Unmarred by Accident—The Only Mishap a "Between the Acts."

Under the scorching rays of the sun, and standing in dust an inch thick, 3,000 persons watched the second annual hill climbing contest on the Stewart hill, Atlanta, Ga., Saturday afternoon last, 28th inst. Nearly 500 cars lined up the sloping roadway. Only one accident occurred and that did not mar the contest as it happened after an event, when the competing cars returned down the hill. One of the cars got away and broke several lamps and fenders on cars lining the course before it finally stopped. Lieutenant Robinson, of the county police was in the car until it bumped another. The lieutenant executed a flipflop and fetched up against a convenient lamp. It broke his fall but cut his chin.

Altogether the affair was a success; there was not a hitch from start to finish. Timing was done by electrical apparatus and the mounted county police rendered efficient service in keeping the course clear. Only one protest resulted—in the free-forall, the time made by the winning car being questioned by John K. Kiser, who finished second. As all the watches recorded alike it is doubtful if the protest will be allowed. Stewart hill measures nine-tenths of a mile.

Although the events were not scheduled to start until one o'clock, spectators gathered at the course as early as 11 o'clock—and brought their lunches with them. Atlanta's best society arrived later, in automobiles, and without the lunches. According to local information "some of the most famed beauty of the South and State was there, and automobile enthusiasts had come from near and afar," so that Atlanta's second annual climb doubtless was the most "scrumptious" ever held.

All the events were closely contested, most notably the class for cars costing \$2.000 and under, in which Joe Landers, Reo, beat C. E. Travis, Cadillac, by the narrow margin of one fifth of a second in 1:293/5. J. P. Grady, Pope-Hartford, won the class for cars under \$3,000, covering the incline in 1:06%; he was second in the \$4,500 and under class, and third in the freefor-all. C. C. Rooney, Thomas, was first in the \$4,500 and under class, finishing in 1:07%. The fastest time of the day was made in the free-for-all, which went to A. L. Almand, Stearns, in 511/2 seconds. This time was protested by John K. Kiser, who finished second in a Thomas Flyer in 54 seconds. The class for cars costing \$1,000 and under went to William Oldknow, Buick, in 1:201/5, with M. C. Huie, Ford, second, in 1:28. The summaries:

Cars Costing \$1,000 and Under. 1 William Oldknow, Buick 1:201/5

THE MOTOR WORLD

2 3 4 5 6	M. C. Huie, Ford J. II. Bryant, Ford Joe Landers, Reo C. A. Fleming, Maxwell J. L. Richards, Ford	1:28 1:31 1:32 1:341/5 1:341/5
C 1 2 3 4 5 6 6 7	ars Costing \$2,000 and Ur Joe Landers, Reo C. E. Travis, Cadillac J. H. Bryant, Ford M. C. Huie, Ford William Oldknow, Buick C. A. Fleming, Maxwell B. R. Padgett, Jr., Ford F. M. Inman, Buick	1:29 ½ 1:29 ½ 1:33 ½ 1:34 1:34 ½ 1:36 ½ 1:36 ½ 1:42
1 2 3 4	J. P. Grady, Pope-Hartford Henry J. Lamar, Jr., Oldsmobile. L. E. Fain, Stoddard-Dayton M. C. Huie, Ford	1:06½ 1:11¾ 1:13¾ 1:16⅓
1 2 3		1:07 ² 1:11 1:16
1 2 3 4	Free-for-All. A. L. Almand, Stearns John K. Kiser, Thomas Flyer J. P. Grady, Pope-Hartford M. C. Huie, Ford	0:51 1/3 0:54 0:594/3 1:15

Automobile Track Planned for Zion.

Salt Lake City automobilists will have an elaborate club house and a mile banked cement track, involving an outlay of about \$11,000, if present plans materialize. According to advices from Zion it is proposed to erect a large club house near Beck's Hot Springs, 150 acres of ground already having been purchased, it is stated. A mile track will be constructed of natural cement, of which there is a mountain close by the proposed site. The track will be constructed to hold a speed much less than a mile a minute with six cars abreast. A grandstand to accommodate 7,000 also will be constructed. None of the promoters of the project are mentioned, but it is stated that the movement has been under way for two months, the only reason that it was not announced before being that the promoters wanted to be sure of the project before making their plans public.

Fall River Automobile Club Incorporates.

The Fall River Automobile Club has been organized and incorporated in the Massachusetts town of that name, with the following officers: President, DDr. George L. Richards; vice-president, Early P. Charlton; secretary, Arthur S. Phillips; treasurer, Albert A. Harrison; directors, Earle P. Charlton, Robert Marshall and John P. Hilton, for three years; George L. Richards, Edward J. Jennings, and Edmond Cote, for two years; H. C. Talbot, G. D. Flynn and Edward B. Remington, for one year.

Automobile Club of Philadelphia Election.

The Automobile Club of Philadelphia has elected these officers: President, Powell Evans; vice-president, Stedman Bent; secretary and counsel, S. Boyer Davis; governors, Stedman Bent, S. Boyer Davis, George B. Linnard, Isaac Starr, Henry P. Bailey, Powell Evans and Jacob B. Seeds.

FOR FIRST AMERICAN SPEEDWAY

Utah Plans One from Salt Lake to Salt Air—Big Interests Unite and Will Organize a Corporation.

A \$40,000 private automobile speedway along the tracks of the Salt Lake and Los Angeles railway from Salt Lake City to Salt Air beach is now an assured thing. At a preliminary meeting held by the Real Estate Association of Salt Lake City last week, the first steps were taken toward perfecting a permanent organization, and a large block of stock was subscribed for by those present at the meeting.

It was decided to incorporate a company for 500 shares at a par value of \$100 per share. Four hundred shares are to be placed on the market and one hundred shares held in reserve in the treasury. J. R. Walker and Jacob Moritz were appointed a committee to canvas the automobilists to dispose of the stock.

J. E. Langford, manager of the Salt Air Beach Co., was present at the meeting, representing the railroad, which he said had authorized him to give the right of way along the tracks for the automobile speedway, and also said that the company was ready to sign an agreement to keep the speedway in repair for five years and to police it. The railway company also will haul the shale for the construction of the road, providing the speedway is put into operation before the opening of the Salt Air beach season. It will be constructed from a lime formation, found on the shores of the lake near Salt Air, which is practically dustless and packs like natural cement, and with two or three coatings of oil, will make an ideal speedway, it is said. The nearness of the source of supply will contribute largely to rapid construction.

The speedway will be fifteen miles long, with a mile straightaway. It will be exclusively for automobiles and motorcycles, with no limit to speed. Those who do not belong to the association which will build it will be charged toll for its use, and it is thought that enough toll and percentages from the railway company on race meet days can be collected during the season to more than keep the road in repair. A garage and stalls will be built near the Salt Air pavillion, and a platform will be extended to the pavilion in order that cars may be run to the entrance of the resort.

The Salt Air Beach Co., which is closely allied with the railway company, has also announced that it will build a mile track for automobile racing at the resort, and that work upon it will be started as soon as the speedway becomes a realty.

The proposed Salt Lake-Salt Air speedway is worthy of note for the fact that it wil be the first automobile speedway of its kind in America.

BIG COST OF FREE MOTORING

How "Don't Care" Usage Piles Up Expenses—Figures that Would Make

Private Owners Gasp.

In very many respects the man who uses a city owned automobile is a fortunate individual. He has the pleasure of its use without having to consider the cost or caring what the bills amount to. While, undoubtedly, it is true that the general public look upon the city's motor cars as a costly appendage of the various officials who are supplied with automobiles, it also is true that very few persons know, even approximately, how much of the taxpayers' money is required to meet the expenses of some official work and very much "joy riding."

Obviously the cost of maintenance of the automobiles varies greatly in the different departments. Much depends on the chauffeur, and the care he gives his car, but it plainly is seen that mileage is an all important factor in the total expense of running. If-and the "if" is a great big onethe city's cars were used only by city officials, when performing the duties of their respective positions, the cost to the taxpayer would not compare unfavorably with the maintenance cost of the private owned equipage. But the wear and tear on the cars that belong to a municipality vastly exceed the wear and tear on cars which are driven by chauffeurs who are required to observe the traffic regulations, who by this very observance are relieved from the necessity of sudden and violent stopping, which is an important factor in the upkeep of a car, when traveling through the streets where the traffic is heavy.

Manifestly it is impossible to compare the cost of maintenance of city owned machines with those that are the property of private individuals. But figures extracted from the official records of New York City showing the running expenses of the automobiles of various departments of New York City, give the citizen the opportunity of knowing just what the city officials are spending on this one incidental of their position, and are valuable as demonstrating the expense of maintaining an automobile when operated by men who, for obvious reasons, "don't care what it costs" and who, generally speaking, have no regard for the abuse to which it may be subjected.

In the year 1907, the Department of Street Cleaning spent \$19.039.31 in maintaining four cars—an average cost per car of \$4,759.83. As this department houses its cars in its own stables, and does its own repairing, thereby doing it at actual cost, and as the department furthermore is in position to make many of the parts that from time to time are required, in its own machine shops, it is apparent that enormous mileage, or unusual abuse, were encoun-

tered in the course of the work, or that an amount of "joy riding" was indulged in that, to say the least, is amazing. Great as it is, however, this amount does not cover, the cost of the transportation of the department officials to whom are assigned the four machines. For in addition three of these officers have horse drawn vehicles and drivers exclusively for their use. The cost of their getting about must therefore cost the tax payers a sum that simply is prodigious.

The Police Department, with three touring cars, and one recently acquired runabout, spent \$8,632.50 in 1907, which amount covers maintenance, but not original cost. Unlike the Department of Street Cleaning. this department had garage bills to pay and had its repairs done by outsiders, which involved a far greater expense than would have been incurred had they been able to do the work themselves. The cost of repairs alone was over \$3,500, whereas the Street Cleaning Department kept four cars running for considerably less than this sum, having spent but \$2,739.68; though this latter item does not include the salary expense as the repairing was done by chauffeurs, of which there are ten. In the Police Department the cars are driven by regular patrolmen, who are detailed by the commissioner for the work, their salaries being paid out of the fund for police duty. Among other items there is also the record of an expenditure of \$22.50 for a fur coat for the first police deputy, but whether this is charged to repairs, renewals or supplies, the books do not show.

In contrast to the amount spent by the police and street cleaning departments is the comparatively small cost of maintenance in the Department of Health. As far as could be determined by a close inspection of the books in the office of the comptroller, this department spent in 1907 \$11,-328.68, which, though more than was spent by the police department, is a smaller sum per car, as the health department is credited with possession of eight automobiles, and if the money was divided amongst all of them the average per car would be but \$1,416.08, a third of what it cost the street cleaners, and but half as much as the police spent. There are, however, only four chauffeurs employed—as such—by the Department of Health, so that if all of the eight cars were in use they must have been driven either by the persons to whom they were assigned or by employes who received their pay for some other duty that was not performed while they acted as "automobile engine man"-the city's official designation of those employed to handle its motor cars.

Of all the automobiles that have been attached to the Department of Health, or, for the matter of that, to any city department, there has been none that is even mildly comparable with an ambulance, which was bought with the intention of using it as a source of income. The idea was to charge each patient \$2 who might be transferred

from one point to another, and as it was used for contagious diseases, there is no suspicion that it ever was even remotely employed for "joy riding." This automobile ambulance cost \$7,600, and was used for one year, the chauffeur receiving \$1,200 and "find." During the year, 802 patients were carried, presumably for \$1,604. Then the ambulance was sold at auction for \$165. The purchaser of it sold it inside of five minutes for \$265. According to the books, the cost to the city for the use of this ambulance for one year was over \$8,800.

But for economy, real, simon pure, downright all-to-be-praised economy, the Department of Water Supply, Gas and Electricity must be singled out as an example of all that is good and pure and holy in the matter of running and maintaining automobiles -that is, if figures don't lie. An exhaustive search of the entire records of that department as shown in the books of the finance department for 1907, reveal an expenditure of but \$1,749.06, which divided between five cars gives an average cost per car of only \$349.81, about the price of one complete set of tires. The accounts of the department, however, fairly bristle with items like this: "John H. O'Brien as commissioner, amount of requisition for incidental expenses, \$500," but as no explanation is attached showing the nature of the "incidentals" it would not be fair to assert that any or all of these \$500 "incidental" entries apply to the automobile account. The accountants in the comptroller's office could offer no explanation of the "incidental" items, and they could not explain the absence of gasolene and other charges usually found in the accounts of departments owning automobiles; in fact, Mr. O'Brien's "incidental expenses" are so numerous and so uniformly placed at the round sum of \$500, that an official examiner might bring up some interesting details were his probe inserted very deeply.

In the absence of any data showing the mileage of the different cars it is impossible to determine with any degree of accuracy whether the running cost is abnormally high or whether the mileage was made at a cost per car mile which would compare favorably with the cost of individual owned machines.

Another interesting item in the expense account of Commissioner O'Brien's department is one . . . runabout, \$995. The name of the car is contained in the records and the list price is more than \$1,700, which makes it appear that the purchasing power of some individual in the department is sufficiently marvelous to cause comment or that——.

It is hard to believe that the latter can be the case. One thing that is responsible for an unusually high price which the city pays for almost everything that is bought for its use is the length of time which elapses before the bills are paid. A merchant must wait from two to six months before he receives the money for goods

sold, or services rendered, to the municipality. Because of this delay, and because too of the amount of red tape involved, rendering bills in triplicate, conforming to certain forms in making out statements, giving their wares certain titles, etc., there are many business houses which not only do not want the city's patronage, but refuse absolutely to sell to it. On this account it frequently becomes necessary to enlist the aid of a third party, a middleman, who can buy of the maker and is willing to sell to the city and carry the account for an indefinite period. Naturally he does not do this sort of thing because of philanthropic motives and sometimes, when the dealer's discount from the maker is too small to compensate for the nuisance of conforming with the city's rules and waiting for the bill to be paid, the government is compelled to pay even more than the list price, and perhaps the middleman can not be fairly condemned for it. In the matter of automobile parts this sort of thing frequently occurs, as it is necessary to obtain the parts of a certain make of machine, from the manufacturer of that machine, and if he will not carry the account then some one must be paid to carry it, as the needed articles are made by only the one maker.

Since 1904 the various city departments have been supplied with 81 cars at a total cost of \$195,003.50. Many of these have found their way into the junk pile and have been sold at auction, as the law compels, and brought prices that would about pay for junk. Some of the "auctions" are "fixed," some are honest, but it is seldom that a car brings anything like its real value when sold in this way.

The following figures show the expenditures of the various departments for cars during the past four years:

Department. No	. Cost.
Dept. of Street Cleaning 8	\$21,714.00
Dept. of Public Charities 2	6,000.00
Board of Education 1	4,700.00
Fire Department 7	21,250.00
Dept. Water Supply, Gas and	,
Electricity	7,277.00
Police Department 6	15,185.00
Dock Department 2	5,775.60
President Borough of Man-	
hattan 3	14,000.00
Department of Parks 6	17,340.00
President Borough of Brook-	
lyn12	16,040.00
President Borough of Rich-	
mond 7	13,086.90
President Borough of Queens 3	8,800.00
President Borough of The	
Bronx 1	4,000.00
Department of Correction 1	2,500.00
Department of Bridges 4	8,142.00
Department of Health 8	19,908.00
Department of Finance 5	9,285.00
Total 81	\$195,003.50
Total81	φ1,50,000.50

It is a matter of considerable notoriety that "joy riding" plays no small part in the usage of not a few of these cars. It is common talk that one of them is used by an official's wife for shopping and other personal purposes, and not long since one of the prominent city officials was arrested while using a city car in New Jersey.

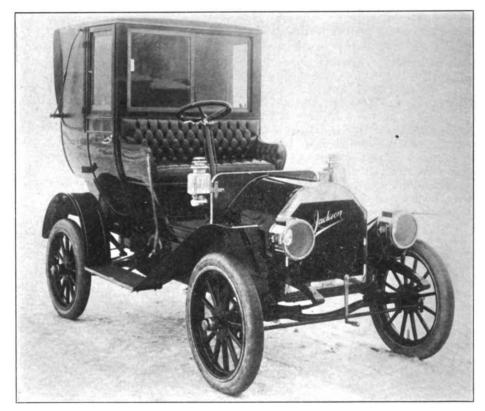
THE MOTOR WORLD

NEWEST AMONG THE TAXICABS

Jackson Enters the Lists with an Attractive
Vehicle—Prominent Details in the
Design and Construction.

Thanks to the stimulus of the increasingly popular taxicab, a considerable number of makers have already produced vehicles answering to this description, while the rapid sequence of additions to their ranks points to the probability of a time not far distant when every maker with pretensions to anything like an inclusive line, will number at least one such vehicle in his catalogue. The most recent acquisition to the ranks of the liptic springs behind, and semi-elliptics in front, and is propelled by a 16-horsepower, two cylinder motor, driving through a planetary change speed gear, and propeller shaft, to the live rear axle. The transmission is geared for a speed of 25 miles per hour, and the control mechanism is so designed that it may be actuated largely by means of the feet, thus facilitating the management of the vehicle in close street traffic.

The body takes the form of a neat and compact landaulet with inside carrying capacity for four passengers. Its general appearance is considerably relieved by the absence of complicated external mechanism either of propulsion or control, and its serviceable and unostentatious exterior is an able recommendation for it as a worthy



JACKSON TAXICAB. THE LATEST COMER

American built taxicab-which must invariably be read as synomous with light closed town car-is the newly announced product of the Jackson Automobile Co., Jackson, Mich., which is here illustrated. Unlike many other vehicles which have been produced, the new Jackson is a vehicle built on thoroughly economical lines, designed for economical service, and though, as the makers explain, in no sense a "cheap cab," it is yet sufficiently modest in its properties to be appealing at once to the private individual who has regard for the cost of his motoring mileage and the corporation which is forced to do so in order to realize the all-ellusive profit on its in-

The cab is built on a light chassis having 90-inch wheel base and 30-inch wheels, shod with 3½-inch tires. It is hung on full el-

member of a rapidly growing class of serviceable vehicles, adapted either to the use of individual owners or to the service of the general public.

Punctures Frequent on Chicago Taxicabs..

Are Chicago's "horse cabbies" seeking to disable their rivals in the business, the drivers of the taxicabs, by puncturing the tires of the latter vehicles? Chief of Police Shippey intimates they are doing so, by commanding officers to keep a sharp lookout for "some persons who are maliciously jabbing knives and nails into the tires of the taximeter cabs." T. J. Doyle, secretary of the Cab Drivers' Union, resents the aspersion and says that the taxicab tires are cut because the drivers are new men and haven't sense enough to keep from running over broken glass.

SOLVING THE HAULAGE PROBLEM

Most Recent Development of the "Road Locomotive"—Practical Evidence of What It May Become.

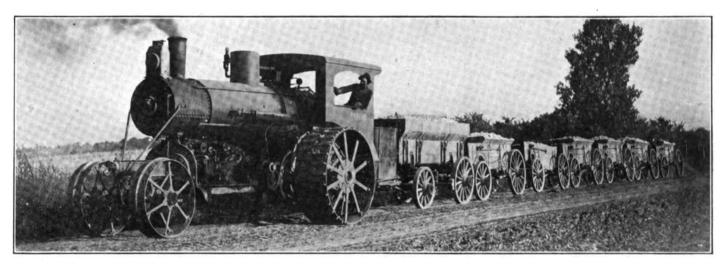
While the haulage of merchandise over the common highway is generally recognized as one of the most important phases of the transportation problem of the future, the fact that it has assumed proportions of considerable magnitude already in some parts of this country, as well as abroad, is not generally known. The use of motordrawn traction trains has been applied with varying degrees of success in England and in investment and operation being very great. Unlike most "commercial motor vehicles," the engine is evidently a direct derivation from railroad practice, and is a road locomotive in the fullest sense. Far from being in any way a relic or copy from railroad or traction engine practice, however, it represents the most recent development in a line which is receiving far more attention than the average "man in the street" is at all aware.

Compared to this, and the 20-ton gasoleneelectric road train shown at the recent automobile show in Madison Square Garden, not to mention other enterprises of a similar nature, either in practice or under way, the undertaking of producing a single vehicle capable of transporting loads of five

EVIL EFFECTS OF COMMISSIONS

Their Relation to Tire Wear and Cost of Maintenance—Demoralizing Influence on Chauffeurs.

"I used to wonder why my tire bills were so large," remarked a man who had owned several cars. "They were absolutely abnormal—not the price of the tires but the frequency with which I had to buy new ones, and as the maintenance of my car, aside from the tires, was reasonable, I set out to find out why I was getting such poor service from tires that were of excellent reputation, high priced and bought direct



AVERY ROAD ENGINE DRAWING A LOAD OF 35 TONS

on the Continent, for many years. In America, particularly in the Western States, it is by no means uncommon, though not as general as in Europe, where highway conditions are more favorable and railroads less accommodating in the matter of rates and schedules. Even with the common American highway conditions to contend against, however, the transportation of heavy loads over considerable distances is a distinct and economical possibility which is neither to be questioned nor ignored.

The accompanying illustration from the Good Roads Magazine, affords tangible proof of what may be done with commercial success. The tractor shown, is an Avery undermounted road engine, differing from the more or less familiar traction engine in that it is designed primarily for haulage purposes, and not as a portable power plant capable of autolocomotion. The combined load of seven trailers represents a total of 35 tons. The view was taken on the Pocona Hill road, near Omaha, Neb., and the burden is that most "dead" and inelastic of all cargos, crushed rock.

Figured on the normal allowance of one ton as the average load for a team of horses, it will appear that the outfit in question is replacing no less than 70 horses and 35 drivers, the evident economy both

tons, more or less, seems comparatively simple. Those who are accustomed to predicting a great future for the commercial motor vehicle, would do well to bear in mind that that "future" is by no means a distant one, and that much which is highly creditable already has been accomplished. How great the ultimate achievement will be is impossible to foretell.

Californian Creates a Motor Truck.

Arthur Mills, of Ione, Amador, County, Cal., has invented a motor truck which he hopes to market with the supervision and financial aid of W. H. Rutledge and others, under the name of the Sacramento Motor Truck Co. The most striking features of the vehicle, which is a sort of family affair, having been commenced by Mills's father prior to his death and later finished by the son, are its close resemblance to a horsedrawn dray, and the fact that it is equipped with ordinary wagon wheels, shod with steel tires. It is driven by a 15 horsepower gasolene engine mounted in front, and connected with the rear wheels by a system of bevel and spur gearing, the final connection with the driving wheels being by means of pinions and annular gears with independent clutching devices by way of differential provision.

from the makers; I add that last to explain that I was not patronizing cut rate houses and buying job lots.

"I looked into the subject pretty thoroughly; talked with friends who had had more experience with automobiles than had I, and finally hit on a clue which led to the entire explanation. My chauffeur was a rascal, as some of them are, and I learned that he was getting commissions from the tire makers on all tires that he bought. Acting on a tip given me by a friend. I watched his driving without letting him know that I was doing it, and I saw that he would drive in car tracks as much as possible or run two wheels on the trolley slot whenever he could. That brought some light to me and when I found that he would drive close to curbs so that the tires would rub them, and that in crossing the bridges he hugged the guard rail of the roadway which tore the shoe whenever a nail or rough, wooden projection was encountered, I fired him. Then I went to the manufacturer and had a heart to heart talk.

"I told him that I was not especially interested in the subject of giving 'presents' to chauffeurs, if that was all there was to it, but when the chauffeur put me to large expense so that he could receive small presents, I was vitally interested and asked him



INFLATING PRICES TO CUT THEM

Bargain House Method of Making Big Discounts—Their Alleged "List" in Comparison with Regular Trade Lists.

Charles E. Miller's new catalog, made up of 216 pages and, if anything, more complete than any of its predecessors, made its appearance this week. Miller makes the issue notable by suggestive reference to the so-called discount houses, whose tricks of increasing list prices in order to make their discounts appear enormous is not wholly

"The so-called 25 or 50 per cent. supply houses cannot quote this discount from the prices in our catalog," says Miller's publication, "although they may be able to quote a big discount on joblot or second hand material, or from fictitious or inflated list prices. We guarantee to furnish new material at standard prices and do not substitute or offer something 'just as good.'"

Just how the "list" prices quoted by the discount houses are inflated, was demonstrated by the comparison with the prices printed in the catalog of one of them with the manufacturers' actual list prices. The instances are rare where the advertised "list" in the so-called cut rate catalog is not vastly in excess of the list published by the makers of the goods. In other words, the "list" quoted by the price-cutters is a "list" which exists only in their minds and is published with the intent of fooling purchasers into the belief that they are getting an enormous discount, which is far from true.

In making the comparison of prices, care was taken to compare only standard articles of the same quality or size. The prices in both colums refer to the same article, not to articles made by different makers. A few of the comparisons follow:

	Cut	
	Price	Makers'
	"List."	List.
Horn No. 1	\$25.00	\$20.00
Horn No. 2	3.00	2.50
Reeds	∫ .50	.30
Reeds	₹.30	.20
Rulb	∫ 1.60	1.00
Bulb	1.00	.80
Register	4.50	4.00
-	7.50	5.00
Thermos	5.00	4.50
Dry cells	.50	.30
Battery connection	1.00	per doz .35
Spark plugs	2.00	1.50
	(1.75	.60
Pliers	1.00	.50
Ammeter	2.50	2.00
	[2.00	1.20
Wrenches	₹ 1.50	.90
	l 1.00	.60
Jack	6.00	5.00
Albany grease	1.50	1.00
Tire tool	9.00	6.00

How Spare Shoes Can be Kept Dry.

The importance of keeping dry the spare shoes carried on an automobile is, of course, generally realized. But evidently very

many drivers conclude that to cover a shoe with a tire case is all that is necessary to keep the moisture out, yet this is not all that is required. Nearly all tire covers are so arranged that, while the back or body of the cover is in one piece, there are two flaps. The object of this arrangement is to permit of the openings being in the same direction, i. e. down. The upper flap buttons over on the rim side of the tire and it overlaps the lower flap which also may be buttoned down-if one may use that expression. In putting the covered tires in the tire holders care should be taken to have the openings in the flaps on the under side, in which position rain will not run in on the shoes nor will they become wet during the process of washing the

Manographe Appears in America.

Hugo C. Gibson, one of its members, has presented to the Automobile Club of America, a Hospitalier-Carpentier manographe, an instrument of recent invention which produces, by photographic process, diagrams showing accurately what takes place within a motor cylinder, so far as the pressure is concerned.

A ray of light is projected upon a prepared plate by a vibrating mirror. Its horizontal movement is controlled by a flexible shaft, which is connected directly to the crankshaft, or in such a way that it revolves in unison with same. The vertical movement of the beam of light is controlled by the pressure in the cylinder, the inside of which is connected with the instrument by a tube. The combination of these two movements causes the beam of light to travel in an irregular line upon the prepared plate, recording the pressure at every point of the piston's movement. The diagram thus produced enables the engineer to determine the horsepower which is being exerted within the cylinder walls, the pressure at the inlet, exhaust and compression points, and to note also whether the valves are properly timed.

New Material Produced for Brake Lining.

Thermoid is the name of a new brake lining which is pronounced by a number of automobile makers who have tested it to be about the best thing of this kind yet produced. It is made of a combination of asbestos interspersed with layers of rubber and strips of thin copper wire. In factory tests a section of the material has been placed over a pulley with a sixty-pound dead weight attached, the pulley traveling about thirty-one miles per day. After a run of over 40,000 miles the strip of Thermoid showed no appreciable wear, being simply worn smooth. It is claimed that it will outlast even the metal brakes themselves, and so confident are its makers, the Trenton Rubber Mfg. Co., 2900 Grove street, Trenton, N. J., regarding its merits that they are willing to send samples and submit to the hardest kind of tests.

what he was going to do about it; and just to put the thing in a proper light for him to see it, I told him that I had about concluded that his tires were no good, that they did not give me the mileage that other tires did for my friends and, I added, that if I hadn't discovered that the fault was with the chauffeur he would have lost a patron and that I would, in all probability, have advised against using his tires when others asked my opinion of them.

"Naturally he saw the light. He said that he hadn't thought of it in that way before and he promised to pay no more commissions to chauffeurs in my employ. Since that interview I have had no excessive tire bills and I compel my chauffeur to get tires at this concern's store. And the chauffeur, finding nothing in it for him, has no object now in giving them obnormal usage."

Chauffeurs Organize "for Protection."

Cincinnati's chauffeurs are aroused over the founding of a school whose promoters claim they can teach a young man to be a proficient chauffeur in 24 lessons of two hours each. It caused the professional drivers of that city to meet last week for the purpose of forming a protective association. James B. South presided. He declared that the proposed association is not to be a labor union and does not propose to dictate as to hours or wages. "Our purpose is mainly to have an organization where we can take united action in any case where the rights of chauffeurs are threatened," he said. "The chauffeur is more than merely a driver of a machine; he is an experienced mechanic." A committee was decided to to draw up a constitution for the Chauffeurs' Association, as the new organization will be called.

To Clean Light Colored Leather.

Automobiles that are upholstered in light colored leather frequently present an appearance of untidyness which can be easily overcome. To clean and remove stains from light colored leather the following mixture may be used with good effect: Boil a pint of milk, let it cool and add one drachm of hydrochloric acid and one drachm of sulphuric acid. Shake well and then add half a drachm of oil of lavender, one pint of vinegar and the white of one egg beaten to a froth. Keep in a tightly corked bottle. Rubbed on the leather with a soft cloth it greatly improves the appearance and removes the stains.

Convenient Tank for Testing Tires.

For testing tires, an ingenious Indiana dealer has the water trough built into the floor of his shop, a tin tank fitting into the opening thus made. The tank thus is removable for cleaning. The trough is provided with a lid fitted with a ring. A trough of the sort, being flush with the floor is always instantly available and at the same time is never in the way.

INVESTIGATING THE WHEEL SLIP

Another Series of Experiments at the Brooklands Motordrome—What They Appeared to Demonstrate.

Wheel slip in connection with the other problems of motor car design, is a subject which, oddly enough, has not as yet come in for its full share of attention. There can be little doubt that considerable slip actually does take place, nor that its existence is an accurate measure of the principal cause of tire wear. But the absolute amount of slip which takes place under ordinary circumstances, and how it is governed by conditions of speed, load, and road surface, never has been investigated to its full value. A beginning in this line has been made, however, on the English Brooklands course, and by the irrepressible S. F. Edge. That these trials are only a very small beginning, and really show little or nothing of the underlying truth of the matter, is apparent from published accounts of them.

The trials just completed, which are announced as the forerunners of a series of more complete tests to follow, consisted merely in driving a car over the Brooklands course at varying rates of speed, and observing the number of revolutions made by the engine in each case. To this end, a special form of revolution counter was attached to the two-to-one shaft of the engine of a racing car, and the machine was first towed over the course, each lap of which, when followed at a certain distance from the pole measures about 25% miles. After the first lap had been made in this way, the succeeding laps were run off under the machine's own power, the recorded revolutions made for each lap, being set down for comparison.

Counting the slip as zero for the lap when the car was towed and no power was being exerted by the engine, it was found that at 30 miles per hour the difference in revolutions between that and the first lap was 40, that is to say, that the engine had turned over 40 times more when driving the car at 30 miles per hour than when the car had been idly towed by another machine. Similarly, when running at 60 miles per hour, the "slip" was found to have amounted to 72 revolutions for the single lap.

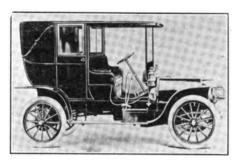
It is to be inferred that the gear ratio was unchanged during the entire test, and that the clutch was permitted to seat firmly at all times, though neither of these facts is brought out in the reports. Furthermore, as the car was run always in the same direction, and as nearly as possible in the same track, it is to be inferred that differential action due at once to the curve of the course and possible deviation from the normal path, was largely neutralized. The fact that the slip at 40 miles per hour, proved to be less than that at 20 miles per hour, however, tends to discredit the entire perform-

ance. The results of the test are as follows:

Test Speed. No. m.p.h.		Engine Revs.	engine revs.		
1		3.732			
2	slow	3,748	16		
3	20	3,776	44		
4	30	3,772	40		
5	40	3,770	38		
6	50	3,790	58		
7	60	3,804	72		

Franklin in the Taxicab Market.

The H. H. Franklin Mfg. Co. has entered the field of the taximeter cab with a new closed body machine, the G landaulet, a 16 horsepower motor car, which is the lightest landaulet on the American market. A number of these are now being tested in



city service. The short wheel base of this motor car, only 92 inches, makes it an exceedingly handy machine for crowded city traffic. It is built on the chassis of the Franklin 16 horsepower touring car, with progressive transmission and jump spark ignition from a battery, along the lines of the 28 horsepower landaulet. It is upholstered in soft black morocco, as being more sanitary for public service. This machine weighs only 1850 pounds, and sells for \$2,500.

Whirling Liquid as Speed Indicator.

The Miloscope is the designation of a new speedometer which just has been placed upon the British market, and which is constructed in accordance with a principle which it is claimed has not before been applied to such a use. The idea is merely that of whirling a body of liquid in a closed container and using the height to which it is driven upon the sides of the vessel as an indication of its speed. The entire part of the device containing the liquid, revolves as a unit, there being no vanes or other parts which turn at different rates of speed. Therefore the problem of preventing leakage is a comparatively simple one. There is but one ball bearing which supports the moving part, and because of the simplicity of its construction and the small weight in motion, the indications are practically "dead beat," and accurate. It is friction driven from the front wheel of the vehicle in the usual way, the resistance of the flexible shaft being practically the only friction encountered. The graduations are for speeds of from zero to 50 miles per hour, and the scale is 41/4 inches long.

FIRE PRECAUTIONS IN PAINT SHOPS

Their Necessity Emphasized by Large Aggregate of Recent Losses—Careful Cleaning up as a Safeguard.

Recent losses from fire occurring in automobile paint shops, approximating \$150,000, directs attention anew to a very dangerous and an exceedingly expensive oversight on the part of those having charge of such establishments, remarks a well known journal of the carriage trade. Spontaneous combustion is no new creature of the fire underwriter's fancy. It is well known in carriage painting annals, and is properly regarded as a large and unmistakable source of danger by carriage painters everywhere.

At best, the automobile paint shop, which is not infrequently, through manifold exigencies, some undesirable section of the city garage, is not conducive to safe painting operations, being beset by automobile repair men of various branches and equally various inclinations relative to matters of safety, and holding in its more or less ill adapted depths specially inviting recesses for the development of unexpected combustion.

On this account, not to mention others which intervene, the automobile painter is confronted with a situation which he can ill afford to disregard. Without permitting location of shop, its environment, equipment, or arrangement of furnishings, to influence his better judgment in respect to safeguarding the premises, it is his first duty to exercise the utmost diligence in keeping the shop clean, at least during the hours it is unoccupied by the workmen, of all waste, greasy, or oily, or paint smeared rags or fabrics of whatever sort. As a matter of fact, such fabrics should not be allowed to lay or be thrown around promiscuously during working hours, much less during the hours when no vigilant eye or keen-scented olfactory is abroad. All paintsmeared, or oil and turpentine or benzine saturated cloths, waste, burlaps, etc., are more or less dangerous, the first named being possibly the least so of all. Oil and turpentine combinations are, if anything, the most dangerous of all, with benzine, on account of its explosive nature, standing a close second. Even excelsior, tow, and common soft wood shavings containing wood filler, will ignite upon slight provocation. It is, therefore, a safe policy at all times and under all conditions to keep refuse matter, including all of the abovenamed, closely picked up, and, while left in the shop, stored in metal buckets with closefitting covers attached. These should invariably be removed from the shop at the close of every working day, and the contents disposed of. Such precautions are inexpensive and besides being conducive to safety, foster a spirit of cleanliness.

DON'T WANT TO SET FOLKS CRAZY

Massachusetts Legislature Rejects "Continuous Noise" Bill—Law Passed Permitting Hill and Road Contests.

Out of the big grist of automobile measures poured into the hopper of the Massachusetts legislative mill only three thus far have passed through the chute known as the committee on roads and bridges. These include one that not only was unjust to owners of motor vehicles, but also was of a character which did not recommend it to any one but the most rabid anti-automobilist. This was the bill calling for some device on automobiles and motorcycles, to sound continuously when the vehicles are in motion. The committee reported "leave to withdraw," and the report was accepted after some debate. During the discussion Representative Cook of West Springfield made his first speech of the session, in defense of the report. Replying to an inquiry by Representative Burr, of Boston, as to reasons for the adverse report, Cook said, with some vigor, "The reason was that we didn't want to set everybody in the State crazy. If anybody has got any good reasons for this bill it's about time we heard

Another of the bills reported on, and with a recommendation for its passage, was the one permitting the mayor of a city or the selectmen of a town to grant permits under which automobiles may be driven on specified highways for a given length of time at any speed. This bill was asked for by the Worcester Automobile Club to enable it to revive its annual hill clomb, but under it there is a possibility of other road contests. This bill went through both branches of the Legislature and last week was signed by Lieutenant-Governor Draper.

The other bill reported on was that of E. Wentworth Prescott to provide that all vehicles using the highways after dark should carry lights. The report was referred to the next General Court. The automobilists are strongly in favor of this law and have urged its passage for several years past. At the hearing this year there was no opposition, but the committee seems to feel that a little more time should be given the rural population that it may learn the benefit of such a law. There is another "lights" bill before the committee, but it is probable that having reported adversely on Mr. Prescott's bill it will take similar action on the other.

The majority of the bills still under consideration are those proposed by the Safe Roads Automobile Association. These have been referred to a sub-committee for the purpose of making a redraft which shall include the desirable parts of all the different measures.

That part of the Governor's inaugural ad-

dress which dealt with automobiles, in which a sliding scale of registration fees is recommended, has not yet been acted upon, but it does not seem probable that the Legislature will make another change in the registration law, when the new law passed last year has hardly begun to be effective. Last year the House was strongly against the sliding scale of fees and the Senate was for it. This matter has been considered jointly by the committee on roads and bridges and the committee on taxation. After the experience of the past year during which the automobile owners have paid the State from \$5 to \$12 each in registration fees another change to a sliding scale, which would bring with it still higher cost of registration, would be a blow to the automobile business in Massachusetts.

New Jersey Clubs in Annual Session.

Directors of the Associated Automobile Clubs of New Jersey met in annual session at Trenton on Tuesday, 31st ult., elected new officers, and passed one or two resolutions.

They endorsed the bill introduced in Congress providing for the erection of a bridge over Newark bay and a bill pending in the legislature which authorizes freeholders to issue bonds for the repair and betterment of roads.

The principal business transacted was the election of new officers, George W. Post, of Paterson, being chosen to succeed Wilbur F. Sadler, of Newark, as president. W. C. Crosby, of Newark, was elected first vice-president; Walter F. Edge, of Atlantic City, second vice-president, and Horace A. Bonnell of Newark, secretary-treasurer. Bonnell succeeds John E. Gill, of Trenton, who refused a renomination because of other duties; Edge takes the place of W. E. Garritt, of Newark.

The constitution and by-laws were amended, making dues payable annually instead of semi-annually. The report of the retiring secretary showed that more than 200 members have been gained in the past month and that three new clubs have been added, making a total of eleven clubs in the association.

Cocks Bill Killed in Committee.

The Cocks bill, which sought to facilitate inter-state travel by providing a Federal license for automobiles, and which was fathered by the American Automobile Association, has received its quietus. As was expected, the House Committee on the Judiciary has decided to report it adversely on the grounds that it is unconstitutional in that it infringes the police powers of the states.

The Continental Caoutchouc Co. has set aside \$1,000 as an added incentive for good performance in the Briarcliff race on April 24th. The money will be apportioned, of course, among the contestants making the best showings on Continental tires.

STEEL MAN TO BE HEAD OF A. C. A.

Entirely New Slate for Coming Election of Officers—Ticket Made up of Representative New Yorkers.

Judge E. H. Gary, executive head of the United States Steel Corporation, will be the next president of the Automobile Club of America, Colgate Hoyt, the present incumbent, having declined renomination. Excepting the hold-over governors, of whom Albert R. Shattuck is one, an entirely new board of officers will assume direction of the organization when elected on April 14.

The new slate comprises a representative list of successful New Yorkers, and chiefly because Robert Lee Morrell figures as the nominee for the third vice-presidency, there are those who see in the new ticket the means of lifting the wet blanket which has served to detract from the popularity of the big club and the cheerfulness of the big club house. But in nearly every instance it is found that it is mainly the wish that is father to the thought. Judge Gary's running mates are as follows:

Vice-President, Henry Sanderson, banker; second vice-president, William F. McAdoo, president Hudson & Manhattan Railroad Co.; third vice-president. Robert Lee Morrell; treasurer, Edgar L. Marston, of Blair & Co., bankers; governors, Commodore Cornelius Vanderbilt, Commodore New York Yacht Club; General Horace Porter, late Ambassador to France; Frederick D. Underwood, president of the Erie Railroad; Wm. Pierson Hamilton, of J. Pierpont Morgan & Co.; Waldron Williams, chairman of A. C. A. Bureau of Tours; Colgate Hoyt, present president of the club; Dr. S. Skaats Wheeler, president Crocker-Wheeler Co.

The governors who will hold over are: Winthrop E. Scarritt, Dave Hennen Morris, John Jacob Astor, George F. Chamberlin, and Albert R. Shattuck.

For World Discussion of Road Damage.

That old bugaboo of the injury which rubber tires inflict on highways is likely to receive its final and authoritative settlement next fall when an international congress of highway engineers will be convened to debate the matter and decide upon a remedy for the evil, if evil it prove to be, and of sufficient magnitude to warrant the adoption of special measures to overcome it. Because of the tremendous outcry which has been raised against the automobile on account of its alleged destructive propensities in this respect, France has issued a call for the meeting, which is to be held in Paris commencing October 11. Director Page of the office of public roads. United States Department of Agriculture, will represent American interests in accordance with an invitation recently extended through the French embassy at Washington.

THOMAS CAR SAILS FOR VALDEZ

American Leader in New York-Paris "Race"
Off for Alaska—Other Contestants
Leave Repair Shops.

Chapter One of that gay French fantasy, the New York-Paris "race," is practically finished. The only American entrant, the Thomas, after a week of exhibition and overhauling in San Francisco and Seattle, was shipped yesterday from Seattle for Valdez. Alaska, where it is expected to arrive April 6th, ready to commence what is by all accounts the most nearly impassable stage of its prodigeous undertaking yet encountered. Local pessimists and wise men from the north say the passage of even one corner of Alaska will prove impossible at this time of year; that the trails are not wide enough to permit passage of automobiles. George Scheuster, who now is captain of the Thomas crew, says it is by no means impossible to attempt it. The foreign contenders are still toiling toward San Francisco.

After the unpleasant experience at Kelton, Utah, where a delay and shipment back to the Union Pacific railroad shops at Ogden was made necessary, the Zust car and its gallant crew traveled in better luck until near Daggett, Col., where 30 hours were lost through a mistake in the course. Los Angeles was reached on Tuesday, the Italians having come through by way of San Bernardino, instead of following the Thomas through Mojave, Cal., a longer and better route thereby being secured. Just outside the city, however, an unusually high bump in the road, and the low fuel tank of the car came into contact, with the result that a lay over of a few hours was required to patch up a formidable hole in the reservoir. Santa Barbara was passed yesterday afternoon, and the Italian colony at San Farncisco is preparing a Festa for to-night.

Thursday of last week, the De Dion was overturned in the mud near Spring Valley, Wyo., and was only righted after eight hours strenuous labor on the part of the French crew, part of the work being carried on after dark by the light of a bonfire.

Later reports show that the party is making better time than either of its predecessors, Goldfield being reached on Tuesday, the 250 miles of desert between Ely and Tonopah having been traversed in 13 hours—beating the Thomas' time by a day and a half, and that of the Zust by several hours. As usual Goldfield declared a dividend and drank itself dry over the arrival of one more New York to Paris "racers." With difficulty St. Chaffray and his team—escaped after the festivities and got to Rhyolite.

Thursday, the Protos came to grief five miles west of Point of Rocks, Wyo., and as a result of a broken driving shaft, had to be shipped back to Ogden, to the shops of the ever-obliging U. P., for repairs. Four days later, it was on the road once more, as good as new-or better. It began to look as though the cars that reach Paris will be mostly of American manufacture and will bear the U. P. imprint. Monday's trip was 70 miles long. Granger, Wyo., the stopping place for the night, was left behind early the next morning. It was a repetition of the trials which had beset the other cars, however, for at 8 o'clock Tuesday night, the German lieutenant and his compatriots were reported to have gained just 20 miles on their course by dint of many more miles of circumnavigation, and to be at Carter-deep in the snow. They are now at Evanston, Wvo.

Gas-Electric Railway Car Tested.

From New York to Baltimore in 1 hour and 45 minutes is the schedule which was forced upon the Strang gasolene-electric railway car, "Irene," on its trial trip last Sunday, 29th inst., when a party of seventy railroad men, promotors, experats and bankers, were carried over the Pennsylvania railroad in the latest product of the Strang Gas-Electric Car Co., of Garwood, N. J. The car, which is the first product of the company, has a record of a mile in 58 seconds and it has bee hoped to improve upon this had not the fog interfered to cut down the running time permitted by the train despatcher. The car is driven by a gasolene engine of special construction, with an electric transmission, and storage batteries as an auxilliary equipment for equalizing the load. The car is of special form, 65 feet long, and weighs 55 tons. Five duplicate cars are in process of construction at the company's plant. Sunday's excursion was made in the interests of the system as a means of economy in suburban and interurban railroad traffic. Representatives of a number of eastern roads were present.

Route Book for Southern Tours.

The touring bureau of The White Company just has added No. 6 to the White Route Book library. The new issue covers the route from Philadelphia over the National Highway as far west as Springfield, Ohio, and then southward through the Southern States to Savannah. This book gives the first definite data ever published on the roads of Kentucky, Tennessee, Alabama and Georgia, and the road directions for following the National Highway through Maryland, Pennsylvania, West Virginia and Ohio are herein given for the first time with accuracy and detail. It is believed that this issue will do much to revive interest in the National Highway and to turn the tide of tourist travel toward the South. The new route book, besides giving detailed directions for over 1,800 miles of road, contains articles descriptive of the route, embellished with numerous illustrations. There is also a fine double-page map of the country traversed. As usual, tourists may obtain copies of the book free of charge.

CHICAGO IN CARNIVAL SPLENDOR

Decorated Parade at Night Ushers in a Week of Festival—Brilliant with Flowers and Electric Light.

With a decorated parade for a curtain raiser, in which pyrotechnics—oratorical and roman candle—siren horn music, and some little excitement played a prominent part Chicago's first "spring carnival" was ushered in last Saturday night, 28th ult. While not as large as the parade at the Indianapolis carnival a week ago, the Chicago parade was more spectacular, occurring as it did at night.

The procession started at 7 o'clock from the New Southern hotel on Michigan avenue with nearly 100 decorated cars in line and wriggled through several streets until it wound back to Michigan avenue for the final review by the judges.

By a process of elimination which lasted about one hour the judges finally got the competitors sifted down to fifteen. The judges considered that the most beautifully decorated car was the Thomas, driven by C. A. Coey, which was awarded first prize. The car was a fairyland of white and red carnations, twinkling with myriads of miniature incandescent lights, while a swaying balloon, bearing a design of the American flag in red, white and blue chrysanthemums. surmounted the car. A propeller in front slowly revolved with its twinkling lights.

The White car driven by Miss Mildred Plew, fully sustained its name. It was dressed with festoons of white roses and little lights, while the tonneau carried a mass of red and white roses. Miss Plew was a symphony in white, and caught the judges' eyes for second prize.

Carl Metzger's Woods electric brougham was a mass of white roses, while in front of the car, suspended on long slender wires was a flock of white doves, with long streamers of white ribbons extending back to the seats. It got third prize, while ten other cars received honorable mention.

Whatcom County Owners Orgonize.

Twenty automobilists last week formed the Whatcom County Automobile Association at Bellingham, Wash. There are 75 owners in the county and it is expected that nearly all of them will join the only automobile club in the county. These officers were elected: President, Dr. F. G. Chute: vice-president, Charles Daw; secretary. Ray Cissna; treasurer, Fred Offerman; trustees, the officers and Dr. Compton

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.



HORSEPOWER AT REAR WHEELS

Tests on A. C. A. Dynamometer Give Some Interesting Results—Some Wide Variences with Motor Ratings.

That horsepower, the makers' rating, horsepower the actual, and the horsepower delivered at the rear wheels of the car, are subject to an even greater variation than commonly is supposed, has been demonstrated in a most spectacular manner by a series of tests which have been carried out on the dynamometer which early this year was installed at the headquarters of the Automobile Club of America. In the course of power tests applied to 17 different cars it has been demonstrated further that the most efficient performance of only a fair majority of the cars is obtained on the highest speed, while in a surprising number of cases the most powerful effort of the motor was obtained on either the first or second speeds.

Results of the tests, so far as obtainable, cover only the make, style and nominal power of the cars, and the maximum power and speed, as well as the gear on which it was developed. Efforts to obtain the powers developed on the other speeds, in every case, which would prove most instructive beyond a doubt, were met with a refusal at the office of the club secretary. Broadly speaking, the information published by the club goes to show a much greater variation in current design as regards the adaptation of gear ratios and transmission mechanisms than would appear to be the case from a casual comparison of the design and construction of the various machines. Incidentally it points directly to a desire on the part of the makers to cultivate either speeding powers or hill climbing ability, in the several cases. rather than to any great uniformity of effort in either direction. The fact that in no case, with the possible exception of the runabout, is the direct purpose of the car considered in this connection, also is interesting to observe.

Make.	Style.	Nom- inal h.p.	h.p. at	Max. h.p. at Wheels.	Miles per Hour.	Gear.
Mercedes	runabout	40	30	29	42	4th
Pope-Hartford	runabout	30	221/2	251/2	36	3d
Westinghouse.	touring	35-40	30	30	251/2	2d
Stoddard-Dayto	on runabout	40	30	43	43	3 d
	runabout	30	221/2	3 3	12	1st
Arrow (6-cyl.)	touring	40	30	30	43	3d
Arrow	touring	28-32	24	21 1/2	11	1st
	touring	50	371/2	44	46	3 d
Packard	limousine	24	18	2034	13	1st
Stoddard-Dayte	on runabout	40	30	24	441/2	3 d
	runabout	35	261/4	15	34 1/2	3 d
Stevens-Duryea	ι (6-cyl.)touring	30	221/2	26	40	3d
Delahaye	landaulet	8-9	63/4	5!4	25	3 d
Locomobile	limousine	15-20	15	131/2	7	1st
Thomas	runabout	40	30	23	40	3 d
Peerless	touring	30	221/2	33	13	1st
Packard	touring	30	221/2	35	28	2 d

That the publication of the results of these and other tests may lead to an entirely new understanding of the meaning of horse-power and of its application in the motor car, goes without saying. Further, that it may lead to a deeper study of transmission efficiencies than has yet been undertaken also would seem to follow.

Two of the cars developed more power at the rear wheels than the nominal capacity of the motor. Ten of them, however, revealed as much power as would be expected, supposing the loss by friction in the transmission to be 25 per cent., which it is ordinarily reckoned to be for purposes of rough calculation. Eight of these developed power at the wheels in excess of that amount, showing either a considerable underrating of the motor or very high transmission efficiency.

In fact, because of the vagaries commonly practiced by manufacturers in the matter of engine rating, as well as the lack of common knowledge as to the exact ratio of power lost in the transmission of one or another type, these figures are not subject to analysis with any degree of exactitude. In any case, the horsepower and speed developed represent the difference between the actual power of the engine and the resistance of the transmission. Where neither value is known exactly, the result must be accepted rather as an isolated fact, than as a conclusion which is worth more than its face value. Were it possible to obtain the performance of the cars under all driving ratios, more satisfactory information might be deduced from the tests. The purely illustrative value of the results, however, is not in the least affected by this objection.

The figures in the following table are self-explanatory with the single exception of those given in the fourth column, which represent the power which would be delivered at the rear wheels in each case were the transmission efficiency 75 per cent., or were three-quarters of the total power of the motor delivered to the wheels. The vehicles tested were all stock machines in road condition. The Delahaye landaulet was one of the two-cylinder taxicabs in daily use in and about New York City. The results are as follows:

DECEPTIVENESS IN TOP MATERIAL

Gormully Puts Purchasers on Their Guard

—Pointers Concerning Some of the
Fabrics that are Used.

In purchasing automobile tops the majority of individual buyers, as well as a large proportion of automobile dealers, depend too much upon the general appearance of the article offered, failing to enter specifically into the quality, etc., of its constituent parts, says A. R. Gormully, purchasing agent of the Maxwell-Briscoe Motor Co. It is human nature, apparently, to take advantage of our fellow humans' failings, and some top manufacturers are, unfortunately, only too willing to take such advantages wherever possible.

The majority of tops to-day are manufactured either from one of the several makes of artificial leather or of rubber-covered duck or drill. Tops manufactured for Maxwell cars, as most of our readers probably know, are made of an artificial leather which is known to the trade as No. 1000 X Moroccoline. Many top makers are, we find, manufacturing tops which they designate as moroccoline tops, but which are, in fact, made of a lower grade of material, although it is marketed under the trade mark of moroccoline. These cheaper grades of moroccoline can be purchased at 25 per cent. less than No. 1000 X; hence, if the dealer is offered moroccoline tops at a low figure he should insist upon knowing of what grade of moroccoline the tops offered are manufactured.

Rubber drill is, also, subjected to the same variations; this material, in fact, is made as light as 20 ounces, whereas the drill used in the manufacture of Maxwell tops and storm fronts is 32 ounces; the difference in cost between these two weights be-30 cents per yard. Such substitution, of course, affords a great saving to somebody, and dealers purchasing rubber tops and storm fronts should insist upon knowing the weight of material used.

Another case of the same character is the flexible glass or transparent celluloid used in top and storm front lights. This material is made in various thicknesses ranging from 5-1,000 of an inch up. The celluloid used in Maxwell tops is 15-1,000 of an inch thick and lists at \$1.10 per sheet, whereas thinner material can be purchased, down to the 5-1,000 material, which costs only 55 cents per sheet.

The bow sockets or supports of the top are another item to which dealers should give attention; these being made in several weights; as a general rule they come in two weights for automobile usage, viz., medium and heavy, and in a very light weight known to the carriage trade as "buggy weights." These light sockets are often used where price is the main consideration.

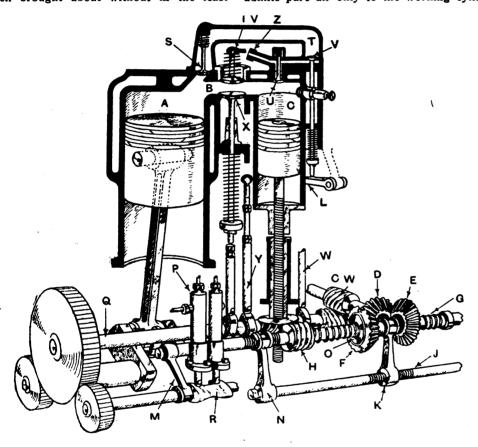
IGNITION AT CONSTANT PRESSURE

Ingenious Application of the Method in a Foreign Motor—An Unusual Feature in the Construction.

Internal combustion motors of the type commonly employed in automobiles are ordinarily constructed on the principle of ignition at constant volume, or in other words, are designed to fire the working charge when the piston is stationary after the end of the compression stroke and on the point of commencing its descent on the working stroke. Many variations of this plan have been brought about without in the least

bustion chamber after compression has taken place, an unusual amount of complication is requisite. In this respect the motor appears to be less practical than the common type. In view of the fact that it is claimed to develop its maximum efficiency at anywhere from half and three-quarters to full load, instead of at full load only, its design is worthy of close study.

In the accompanying illustration, which is an ideal representation of the machine in question, the various organs are shown in half-section regardless of whether they lie in the same plane or not. From this it will appear that the main inlet valve, IV., which is operated mechanically from the lifter, W, by means of a long rocker arm, not shown, admits pure air only to the working cylin-



altering the cycle of operations, while in a few cases, attempts have been made at introducing other cycles in which ignition is supposed to take place at constant pressure. A novel application of the second method is found in the Roche motor, a recent foreign invention, which has been unearthed by the Autocar.

In this machine, which possesses the unusual feature of a combustion chamber which is entirely separate from the working cylinder and connected to it by means of an open port, governing is performed by varying the volume of the combustion chamber in question, this, in turn, being effected by moving a piston up or down in a small auxiliary cylinder which serves this purpose. As a result of this method of governing, as well as on account of the forcible injection of the fuel into the com-

der, A. Following the suction stroke, this charge of pure air is compressed, forming a high pressure in the auxiliary combustion chamber, C, and the transfer port, B, joining it with the working cylinder. A small volume of air also is compressed in the tubular chamber, T, above, through the poppet valve, S. During the latter part of the compression stroke, the pumps, P, driven by the cams, R, force small quantities of fuel and water through the nozzle, Z, into the small chamber over the combustion chamber, C, adjoining T. The pumps are designed to give a variable lift, and their action is governed by the fork, M, controlling the position of the cams, R. The object of injecting the small quantity of water is to guard against pre-ignition.

At the instant of commencing the working stroke, the mechanically operated inlet

valve, V, is raised by the rocker arm, L, permitting the air which has been compressed in the chamber, T, to enter the smaller chamber below whence its contents of mingled fuel and water is at once discharged through the automatic valve, U, to the combustion chamber, ignition immediately taking place. The immediate rise in pressure at once forces more air into the small chamber, T, so that an injector effect is secured, which serves to force all the fuel into the combustion chamber during the early part of the working stroke. The greater part of the action of combustion takes place in the chamber, C, so that the air present above the working piston and in the transfer port is used only as a medium of expansion and to cool the gas, thereby rendering the motor cooler in operation than otherwise would be the case.

The method of governing the size of the combustion chamber is as ingenious as that of accomplishing the cycle itself. The cam shaft, O, drives through worm gears, a transverse shaft which is geared to the commutator, the double distributor for water and fuel, and also a lubricating pump. The bevel pinion, D, at its other end, drives the equal and opposite bevels, E and F, which are mounted loosely over the shaft. G. The worm, H, which is mounted on this shaft, meshes with a gear which is fixed relatively, but runs on a thread cut in the rod of the auxiliary piston, traveling in the cylinder, C, so that any motion of the worm, H, serves to vary the volume of the combustion chamber. By means of suitable clutches the bevels, E or F, may be connected temporarily with the shaft, G, and the desired movement of the auxiliary piston effected in either direction. Two small cone clutches, O, actuated by the fork, K, against the pressure of suitable springs, are employed to connect the bevels to the shaft, G, as required. To throw either one into connection, the small shaft, J is rotated through the usual lever mounted on the steering column, this motion serving to shift the fork, K, along it and engage the proper clutch. This causes the shaft, G, and the gear, H, to revolve, moving the auxiliary piston. At the same time the rotation of the shaft, G, causes the second fork, N, on the rod, J, to draw the rod far enough in the opposite direction to release the clutch from engagement, thus making the movement of the auxiliary piston directly proportional to the movement of the hand lever at all times.

The novelty of the cycle here introduced will be observed to be two-fold. First, only pure air is compressed, the combustible gas afterward being introduced into the combustion chamber and fired at relatively constant pressure. Second, the compression is varied to suit the demand for power, increasing as the quantity of fuel diminishes in proportion to the volume of pure air. In this way, combustion is made complete at every cycle, and the efficiency is maintained at a high point throughout a considerable portion of its range.

DEALERS WERE ALL EASY MARKS

And Willieboy Had Numberless Joy Rides

—Those Who Got Stung Let Him

Sting Others.

There is a certain young man in Cleveland whose name, although it is known, shall be mentionless—who is laying up great stores of trouble for himself. Already a number of local dealers are hot upon his trail and when the storm breaks—woe be unto him!

This smooth young man, with his glib tongue and apparently earnest manner, has had a number of dealers "standing upon their heads" for a week or so, to employ a slang phrase. In turn he has neatly "stung" every one of them, and they have passed him along, each hoping to see the next dealer fall into the trap.

The young man began operations three weeks ago and since then has placed "orders" for a half dozen cars, although in each case, it is not strange to relate, the cars was never delivered. His plan of procedure was cunning and crafty. His father lived in the West, so he said, and he disired to purchase a high powered car—a good one, mind you, a high class, well made machine, capable of putting speed records to shame. Also, a friend of his was coming to town in a week or so, and his friend would purchase the same kind of car.

With all this in mind, and forgetful of ride grafters. how the misguided agents did work to land that double sale! Night after night such and such an agent would take the earnest young man for long rides, with the thought of two big commissions constantly in mind. Night after night the young man's evenings were spent in a riotous round of demonstrations, theatre box parties with dinner and wine afterward, so it is said to be truthfully recorded on the expense books. The young man was having an ideal time.

One unused to such lavish entertainment and, say, a bit unscrupulous, can hardly blame the young man, and so he went from one dealer to another. In numerous cases he "placed his order," but found that "papa was out of town"—referring to the mythical western city—and couldn't be reached by wire. The agents paid the freight on the telegrams and waited for papa to return and send the check on to Willieboy to hand over to the lucky agent.

For nearly two weeks this has kept up and the only reason that Willieboy has not been arrested is due to the fact that every agent that has been "stung" realizes it, and knows that he would be the butt of ridicule from his fellow dealers if the secret got out, so he has kept quiet about it and waited returns from the other dealers.

Maybe Cleveland dealers are "easy graft" and maybe they are not, but it is stated that

by actual count, the quiet Willieboy youth has successfully "worked" seven dealers, each of whom has been in business long enough to have his eye teeth cut. After many demonstrations and theatre parties one agent, bolder than the rest, began a quiet little investigation, and determined to hunt up the young man's father. That's how the secret became known. Strange to say, the respected parent did not live in the western city, but right in Cleveland. He was quick to disavow any hope of having any car in the family, and said his son was "only having a little fun," which amusement, however, he did not evince any desire to pay for.

At present the dealers who have been "stung" and have been "put wise' by the charitable and investigating tradesman, say they will not prosecute the young man, but woe betide him if he happens to "repeat" in a moment of recklessness of absentmindedness, upon some dealer who "is on."

Automobile Thief Ran Into Trouble.

California, which runs Indiana a close race in the discovery of prodigies, has a new one. He is a self-confessed thirteenyear-old automobile thief and was turned over to the police after being captured in the Osen & Hunter garage in San Jose. Clifton Croyer took a car belonging to Dr. N. H. Chamberlain and drove it from Oakland to San Jose, stopping at the garage for water. He could give no satisfactory answer to several questions and the garage men notified the police who, just a few minutes before, had received notification of the theft, by the Oakland officials. Young Croyer, who said he was a member of the Young Men's Christian Association at Stockton, would not say why he took the car, but said that he intended abandoning it and returning home to his mother in Stockton.

Relay Flight with Stolen Automobiles.

Two prosperous looking men coolly entered the \$5,000 car of William G. Costin and drove away, while the latter and some friends were enjoying a play at a Pittsburg theatre one night last week. As a general rule beggars are not choosers, but this pair was exceptional. The purloined car, being stalled in the mud at Glenshaw, they resolved to look around for another relay. Entering the tool house of the American Natural Gas Co. they steered the \$2,000 car of George Weittner out to the road and hurried off. Both cars were discovered, abandoned, the next morning, but no trace has been found of the thieves.

Saratoga Organizes an Automobile Club.

Although one of the centers of horse racing during the summer, Saratoga, N. Y. will have an automobile club, the Saratoga Automobile Club having been organized last Saturday with thirty members. Clarence B. Kilmer was elected president and Edward B. Ashton, vice-president.

AUTOMOBILES PREFERRED TO GEMS

So They are Blamed for Failures in the Jewelry Trade—How an Alleged Victim Explains It.

Nowadays it is the fashion to blame the automobile for failures in many branches of mercantile pursuits. Particularly is this so in the cases of failures in the jewelry trade. Whether or not the growing supremacy of the automobile as a means to social preferment and as a fashionable medium of diversion, has anything to do with the gradual depression in the jewelry trade matters not; sufficient is it that this cause is ascribed as the reason for many failures. The most recent example is that of a big Chicago jewelry corporation that failed recently, with liabilities amounting to about \$100,000.

Albert W. Adcock, one of the officers of the company, in reciting the cause of the failure attributed it mainly to the popularity of the automobile. He said that society people of reputed wealth are not only failing to buy expensive jewelry as they did before the automoble came into such vogue.

"I attribute our failure mainly to the great craze that has recently taken possession of society people," said Adcock. "The purchase and maintenance of a first class automobile involves no little expense and I know ā big lot of people whose names would be recognized as standing high on the social roll of Chicago who have made, and are making, all sorts of sacrifices, in order that they may keep a first class garage, a good chauffeur and may give notable automobiling parties.

"This being the case, they are not buying the same class of jewels and silver that they formerly did. They find that the expenses of the automobile establishment are such that they are compelled to give presents which, while they look about as good, are of lighter weight and less expensive quality than those they have heretofore given.

"When tires cost \$60 to \$90 apiece, people are apt to get along with lightweight silver. It looks very well and at a dinner no one is going to try how easily it will bend, nor examine it for the maker's name."

Jury Determines Value of Human Legs.

Although it might puzzle some juries it did not take a Norristown (Pa.) jury many minutes to decide how much it is worth to cause the breakage of two legs—one natural and one artificial, when it ordered John R. Wood, an iron manufacturer of Conshohocken, to pay \$300 damages to John Rigler, also of that city, as the result of a suit brought by Rigler to recover for being thrown off a horse. Wood was held responsible for not stopping his automobile on the road in Plymouth township when the horse and its rider approached.

The Week's Patents.

877,970. Pneumatic Tire. Otto Uhlmann, Taunton, Mass. Filed Feb. 16, 1907. Serial No. 357,602.

1. A vehicle wheel comprising a concaved felly, a pneumatic inner tube resting in said felly, a convexed tube cover fitting over the outer portion of the inner tube, a removable annular plate at each side the felly extending partially over the tube cover, an outer casing extending over the tube cover, and upper portion of said annular plates and provided with a heel piece at each lower edge, a removable annular plate at each side the felly outside said annular plate and provided with a hook shaped flagge at its provided with a hook shaped flange at its upper edge to grasp said heel piece, and means for maintaining the parts in assembled position.

878,005. Automobile Driving Gear. John E. Johnson, Leaf Mountain township, Ottertail county, Minn. Filed Feb. 16, 1907. Serial No. 357,657.

1. In an automobile, the combination with a supporting frame, of a front and rear axle, each divided in the middle, supporting wheels fixed on the outer ends of the axle section and bevel gears at the inner ends thereof, hubs journaled upon the abutting ends of the axle sections and provided with radial arms, compensating gears journaled at the ends of said arms and meshing with the bevel gears, a ring shaped sprocket wheel trunnioned on the ends of the journals of the compensating gears, and an endless chain belt engaging said sprocket wheels and thereby turn the rear and front shaft simultaneously, said front sprocket wheel having a ring held to it by two diametrically opposite trunnions, and the ring having at ninety degrees from said trunnions internal trunnions at the ends of the journals of the compensating gears, means for imparting rotary motion to said sprocket wheels, means for guiding the front sprocket wheel, and means for steering the front wheels by swinging the entire front axle in a horizontal plane.

878,015. Tubular Metallic Spring Tire. James K. Parker, Longbeach, Cal. Dec. 12, 1906. Serial No. 647,554.

1. A vehicle wheel tire comprising a rim body, a sectional tubular elastic metal tire secured thereon, and springs within the sections and bearing outwardly thereon, said springs extending between the rim body and the metallic tire sections.

878,072. Transmission Gear for Automobiles. John W. Lambert, Anderson, Ind., assignor to The Buckeye Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Jan. 26, 1907. Serial No. 354,178.

1. A driving mechanism comprising driving friction disc, a driven friction disc, a shaft carrying the driven friction disc, means for mounting said shaft to permit it to have a backward and forward movement. a beveled gear carried by said shaft, a longitudinal shaft carried by said longitudinal shaft meshing with the gear on the shaft of the driven disc, a rear axle, gears connecting the rear end of the longitudinal shaft with the rear axle, and means where-

THE ACME MOTOR CAR CO. Reading, Pa.



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.

AJAX WEAPPED TIRES

Guaranteed for 5,000 Miles Riding Write for copy of Guarantee

AJAX-GRIEB RUBBER CO. General Office, 57th St. & Broadway, New York AGENTS IN ALL LARGE CITIES

Ask ns about ontinental Ready-Flated Tires.

They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY 43 Warren Street, New York City.

"Keep your eye on Continentals"



FRANKLIN Automobiles

Franklin light-weight construction is stronger than ordinary heavy construction—and does a lot more. Write for catalogue.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade two and four cylinder motors, 10 to 25 horsepower. They are equipped with self-contained oiling system and ready for attaching magneto. Highest grade workmanship, efficient, durable and simple. Also clutches and transsend for catalogue.

CONTINENTAL MOTOR MFG CO., Muskegen, Mich. K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill. T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

1908 Winton Sixteen-Six; new; \$3,600. X, care Motor World, Box 649, New York City.

OR SALE-Haynes Model O, 4-cylinder 30 horsepower, in first class condition; just overhauled at factory; Sprague top, speedometers, shock absorbers; tires in good condition; must sell; have bought another. H. B. COBLENTZ, M.D., 649 Florida Ave., N. W., Washington, D. C.

FOR SALE—No. 14 sliding gear transmissions; 90 bodies, primed only; 75 bodies, painted only; 72 bodies, painted and trimmed; 69 sets bevel drive axles and hubs; 130 frames, unassembled; 30 frames, assembled; 35 radiators; 50 tanks; 59 two-cylinder opposed engines, 5½5; 105 sets springs; 48 mufflers; 98 sets universal joints; 47 steering wheels, 14-inch; also various quantity of other parts, all suitable for 2,000 pound touring car or runabout. RANDS MFG. CO., Detroit, Mich.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

SINGLE CYLINDER CADILLAC

showing actual cost of maintaining their cars. It also contains much advice of value to the automobile buyer. Ask for free copy of Booklet No. 6.

CADILAC MOTOR CAR COMPANY, Detroit, Mich. Member Assn. Licensed Auto. Mfrs.

"SUCCESS" **\$250** AUTOMOBILE

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature.

Success Auto Buggy Mfg. Co., Inc. 531 Be Baltvere Ave., St. Louis, Me.

For catalog, address Dept. 16.

NORDYKE & MARMON CO. INDIANAPOLIS, IND. (Estab. 1851)

Boston Branch Motor Mart 91 Church St.

New York Carford Motor Car Co.

CHAS. F. KELLOM & CO., Philadelphia, Pa.

by the shaft of the driven friction disc may be moved backward and forward without moving the gear carried by said shaft away from the gear carried by the longitudinal shaft.

878,073. Lubricant Distributor for Engines. Vincenzo Lancia, Turin, Italy, assignor to Lancia & Co., Turin, Italy. Filed May 13, 1907. Serial No. 373,486.

1. An engine lubricant distributor comprising a cylindrical casing closed at its ends a rotatable cylinder provided with two chambers communicating respectively with the ends of the casing, suction and discharge branches on the casing communicating with corresponding openings in the said chambers, a third chamber in said cylinder communicating at its ends with the two chambers, a displacer piston in said third chamber and means within the casing for reciprocating the piston in the cylinder, substantially as described.

878,074. Motor Vehicle. Josef Latzel, London, England. Filed June 10, 1907. Serial No. 378,242.

1. In combination, a driven gear member, an undivided stationary supporting axle member road wheels supported thereon and a continuous undivided rotating axle member connected to the driven gear member and to the road wheels, substantially as set forth.

878,075. Pneumatic Tire. Henry D. B. Lefferts and Eliphalet De Camp, Orange, N. J. Filed Jan. 15, 1907. Serial No. 352,440.

1. A pneumatic tire comprising an outer casing, a normally inflated main inner tube having a valve stem, and a normally deflated divided supplemental reserve tube arranged without the main inner tube and having terminal soft cap portions disposed in opposite relation to the valve stem, said soft cap portions being adapted to be inflated about said valve stem for the main inner tube.

878,077. Cushioning Device for Automatic Dilution Valves in Carburetters. Adele A. Longuemare, Paris, France. Filed Jan. 10. 1907. Serial No. 352,359.

1. In a device of the character described the combination with a member movable by variations of pressure, of a closed cylinder, a hollow piston in said cylinder and provided in each face with a plurality of holes, and an operative connection between said piston and said member.

878,081. Vehicle Spring. Charles A. Meredith, St. Louis, Mo. Filed Sept. 3, 1907. Serial No. 391,245.

1. A spring of the class described comprising an upper section; a lower section; supports connected with the lower section; a sleeve mounted upon the axle of the vehicle and pivotally connected to the supports; an auxiliary spring carried by the supports to provide a more even and equal movement to the vehicle springs, substantially as specified.

878,156. Automobile Running Gear. Charles T. Pratt, Frankfort, N. Y. Filed April 10, 1907. Serial No. 367,308.

1. The combination in an automobile running gear of the frame and axle and pair of steerable ground wheels carrying one end of the frame, and pair of independent levers intermediately pivoted to the frame, an axle and pair of ground wheels carrying the rear ends of said levers and an axle and steerable pair of ground wheels carrying the forward ends of said levers and connected therewith by a suspending shackle all arranged to carry the other end of a frame, substantially as set forth.

878,176. Spark Timer. Darwin Almy,

Providence, R. I. Filed May 16, 1906. Serial No. 317.247.

1. In a spark timer, the combination with a shaft, of a cam in the form of a collar having the roll rotatably secured in a recess in the collar by a screw pin in a position for the roll to extend beyond the periphery of the collar and adjustably secured to the shaft by a set bolt, a screw threaded trunnion supporting the shaft, a metal frame having the internally screw thread hub, the flat face, a plurality of lugs formed integral with the frame on the face, an insulating block secured to each lug and interfitting therewith, a binding post secured to the frame, a plurality of switches each switch consisting of a flat spring having a contact point adjacent its free end and rigidly secured at its opposite end to a lug in a position for the roll on the cam to engage the spring, a flat spring rigidly secured at one end to the adjoining insulating block by a screw and the nuts, and a screw post having the contact point adjustably secured to the free end of the spring by a split block and a nut in a position for the contact point to engage with the contact point, and a plurality of stops consisting of a screw covered with an insulating material and secured to the frame on the face in a position for the free end of the spring to engage with the stop and hold the contact points in their open position, whereby a direct electrical connection is made with the springs and a reciprocating sliding contact is given to the contact points on the springs, as described.

878,297. Carburetter. Leon M. J. C. Levavasseur, Puteaux, France. Filed May 16, 1907. Serial No. 373,922.

In a carburetter, the combination, with the admission chamber for the air having a lateral branch, and a valve in the lower part of said chamber which is opened by the suction of the engine, of a hydrocarbon container mounted on said chamber at its upper part and having a capillary passage directly above and in alignment with said valve, and means for supplying the hydrocarbon to said container.

878,364. Explosion Engine. Charles L. Edwards, Vernon, N. Y. Filed March 8, 1907. Serial No. 361,214.

1. In an explosion engine, the combination with a cylinder provided with a water jacket, and having in the end thereof an opening in which are formed an inner conical and an outer cylindrical valve seat, and having an inlet port and an exhaust port communicating with the opening, of an exhaust valve normally resting on the conical seat and closing the opening, said valve having a stem extending out of the cylinder, said cylinder being provided with a valve stem guide provided on its inner end with a petticoat, an inlet valve having a plurality of openings therethrough, normally closed by the petticoat, said valve moving in the cylindrical seat, and having a stem encircling the exhaust valve stem, said valve having a peripheral flange adapted to close the exhaust port, when moved away from the petticoat, concentric springs resting at their inner ends against the cylinder, and encircling the valve stems, the outer spring being of greater strength than the inner spring, a collar on each of the stems for engaging the outer ends of said springs, the collar on the exhaust valve stem being of greater diameter and engaging the stronger spring, said collars being spaced apart whereby the continued movement of the exhaust valve stem after the opening of the exhaust port will move the inlet valve to close the exhaust port and to open the inlet port, a drive shaft, a piston in the cylinder and connected therewith, and a connection between the drive shaft and the valve stem for operating the same at regular intervals.

"Supplies the Missing Link"

New York, March 16, 1908.

Bicycling World Co.:

Gentlemen: I received your book "Care and Repair of Motorcycles," and after reading it carefully I must say that it supplies the missing link. It is a book which should be in possession of not only the trade, but of every owner of a motorcycle.

I congratulate you on the issue and have every reason to believe that it will facilitate the motorcycle business.

C. KAUFMAN, Mgr. The Motor Equipment Co.

25 Cents



25 Cents

Spring Having Officially Arrived

the value of the book to motorcyclists and repairmen will be more pointedly demonstrated. Be wise in time. If you have not ordered a copy, order it to-day—before you "take to the road." It will help you over many a stumbling block.

BICYCLING WORLD CO.

154 Nassau Street, NEW YORK

THERMOID Brake Lining

POSITIVELY WILL NOT BURN—GRIPS INSTANTLY—LASTS INDEFINITELY

Write for Particulars

TRENTON RUBBER MFG. CO.,

2900 State Street, TRENTON, N. J.



Triumph Grease, What Is It?

It is the newest production of auto grease, and benefitting by the experience of other makers, we have produced the best one yet. [We do not imitate any one, nor follow any other maker's plans. Our grease is spongy when made—it is spongy all the time, but it does not melt or run out. [It never gets hard or stiff so that it will not do its work properly—no matter how cold the weather is. It is made of the purest and best lubricants to be found, and compounded in such a manner as to produce what the auto user has long wanted. [A grease that will lubricate from start to finish, and will last long enough to pay for the trouble of putting it in the machine, and then staying right there like a good clerk attending to its own business constantly, and does not need punching up and renewing every few days, and leaves the machine clean and not all grease when through using it. [It is the red thorn in the side of the old fogy grease, or the non-fluid oil makers. It is always RED. No other grease like it, and it is not like any other grease. So we are not imitators in any sense of the word. [Buy it, and try it, and if not all we claim for it, any dealer will refund all expense it has been to you.

The Perfection Grease Company, South Bend, Ind.

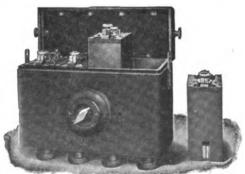
The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

\$2.00 Per Year

Specimen Copies



HEINZE Coils

Send for 1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

Solar Lamps

"Show the Way" from New York to Paris

The Thomas Flyer, the American representative in the New York-Paris Race, has complete Solar lighting equipment.

BADGER BRASS **MANUFACTURING** COMPANY

Two Factories

KENOSHA, WIS.

436 Eleventh Avenue **NEW YORK**







For Antomobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

TRONG-DURABLE
CALELESS-RUSTLESS
MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO



NEW SENSATION

Equip your car with

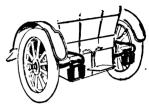
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will still be with you, but you won't know it. Our new booklet is very interesting, and is yours

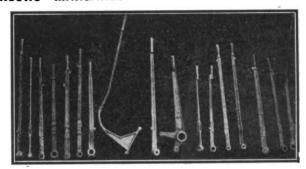
for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch ved to New York Metor Mart Bidg.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



de Makers & SONS SHIP Philadelphia, Penna. BUILDING COMPANY,

BODIES AUTOMOBILE



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished Racine, Wis. RACINE NOVELTY MFG.3 COMPANY,



Hotel Tuller

New and Absolutely Fireproof. Adams Ave. & Park St. **DETROIT. MICH.**

AUTOMOBILE **HEADQUARTERS**

In center of Theatre, Shopping and Business district.

Table De Hote Dinner, 75c
A la Carte Cafe
EVERY ROOM WITH BATH
Rates \$1.50 per Day up. L. W. TULLER Prop. M. A. SHAW, Mgr.



\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Box No. 250 AUBURN, IND.

MAKE CASTINGS

Aluminum, Manganese Bronze and Bearing Metals.

Our Catalogue tells you WHY.

LIGHT MFG. & FOUNDRY CO Pottstown, Pa.



STA-RITE PLUGS

Save a lot of ignition troubles, because they "Stay Right the longest!" Don't take our word for it,—try a STA-RITE and see for yourself. Double or single Porcelain,—Mica or Magneto,—all kinds. All Good Dealers.

THE R. E. HARDY CO.,

85 Watts St., New York City



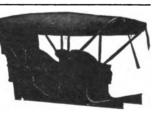


THE NDE IS RIGHT

Ruilt to outwear an auto, and it will Send for Booklet

Index Speed Indicator Co. MINNEAPOLIS. MINN

SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies SPRINGFIELD** METAL BODY CO., Springfield. Mass.



COMPLETE COURSE AUTOMOBILE INSTRUCTION

Invaluable to the owner or prospective owner of a motor car. Practical and to the point. Send for prospectus to the

Correspondence School of Motor Car Practice Tarrytown, N. Y.

Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

High-Grade Axles



Pressed Steel Frames

Steering Columns Steel Stampings of Ali Kinds

Transmissions

Send Prints for Estimates

243 Clinton Street,

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

Sand Too Deep—No fill 100 See 2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00. JACKSON AUTOMOBILE CO.. Jackson, Mich.



Car Accessories Motor

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.

New illustrated catalogue free

THE AUTOMOBILE EQUIPMENT CO. 856 Jefferson Ave., Detroit, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



THE CONTINENTAL AUTO MFG. CO.



Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Meter Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.



THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of

Name

Address

CIMIOTTI GARAGE

New Yerk City

Broadway and 110th St.

Run as a garage ought to be run. Personal Attention.

New and completely equipped repair shop. Expert workmen. Try us.

> Metropolitan Agents for "PULLMAN" CARS

> > Tel. 2686 River.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed One Year

WITHERBER IGNITER CO.,

1876 Broadway, New York



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.
New York.

Exclusive LOGAN

-Single shifting lever gives three speeds forward and one reverse.

For other features write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chillicothe, 0.

LAVALETTE & CO. 80% of Magnetos used in 6-cylinder cars are EISEMANN High-Tension MAGNETOS 112 West 424 Street.

MORGAN & WRIGHT TIRES ARE GOOD TIRES

"AURORA"

Runabout \$775—20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS,

Aurora, Ill.

THE THOMAS

America's Champion in the New York-Paris Race. Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

Better Because Regular

An Oberdorfer Pump never "sticks." It works ay in and day out in a uniform manner.

Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

TRUFFAULT-HARTFORD

SHOCK ABSORBER

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO.,

E. V. Hartford, Pres. 66 Vestry St., New York

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akren, Ohie

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are or-dering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.

To Owners of Cars Costing Over \$1800

Add the neat, snappy little Brush \$500 Run-about to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit



MICHELIN TIRE CO.,

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO.,

Kokomo, Indiana.

Members A. L. A. M.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts

COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Cenn







EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St., and Broadway and 73d St.
CHICAGO—20 LaSalle Street and 1615 Wabash Avenue.
FOBES AUTO SUPPLY CO., Portland, Oregon.
FOBES AUTO SUPPLY CO., Seattle, Washington.
WAITE AUTO SUPPLY CO., Providence, R. I.

BOSTON—292 Devonshire Street.

BUFFALO—724 Main Street.

DENVER AUTO GOODS CO.—Denver, Colo.
PENN AUTO SUPPLY CO.—Philalelphia, Pa.
SAVELL RUBBER CO.—Jacksonville, Fla.

FRANKLIN Automobiles

You can't buy easy-riding by the pound—nor carrying-ability either.

The Franklin automobiles are the lightest-weight automobiles of their power. They are as easy-riding as the finest horse-drawn carriage. And they are abler and more durable than if they weighed twice as much.

The 5-passenger Franklin Type D for example, rides so smoothly that no automobile but a Franklin can keep up with it on ordinary roads. It weighs under 2,200 pounds. It carries its load farther in a day than 5-passenger automobiles that weigh seven hundred to a thousand pounds more; and it is doubtful if any of these could stand such a hard-driving test as Type D went through in its 40-hour Chicago to New York run. Its price is \$2,850, yet its efficient air-cooled engine and light weight make it cost less in six months than a heavy automobile of considerably lower price.

The Franklin Type G family touring car costing \$1,850 and weighing only 1,600 pounds, does more work than any other 2,000-pound automobile and costs less to run.

The six-cylinder 7-passenger Type H at \$4,000 is completely free from vibration or jolting. And it is the ablest high-power touring car ever built; yet it weighs 500 pounds less than the average 5-passenger 4-cylinder automobile, and is more economical to maintain.

Every Franklin automobile has four full-elliptic springs. These have a "movement" of 57/8 to 6½ inches as compared with only about 2 inches in the ordinary half-spring—before the frame bumps on something. And the Franklin wood-frame is laminated (built up in layers) so that it is stronger than a pressed steel frame, and absorbs shocks and vibrations as steel will not do.

A ride in a Franklin automobile will probably give you an entirely new standard of comfort as well as ability.

Write for the catalogue of Franklin models

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

Member Association Licensed Automobile Manufacturers.





Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K—4-cyl., 4%x5 \$3500 Model R—6 cyl., 4½x4¾ \$4200

Model N-4 cyl., 5x5 \$3700 Model T—6 cyl., 5x5 \$5000



Write for Particulars

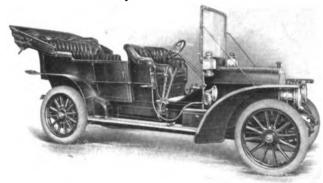
National Motor Vehicle Company

1007 East 22d Street
INDIANAPOLIS, - IND.





Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company; 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

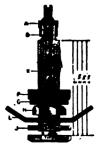
Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE Trade Mark Registered April 30, 1895



SIMPLE AND ABSOLUTELY AIR TIGHT

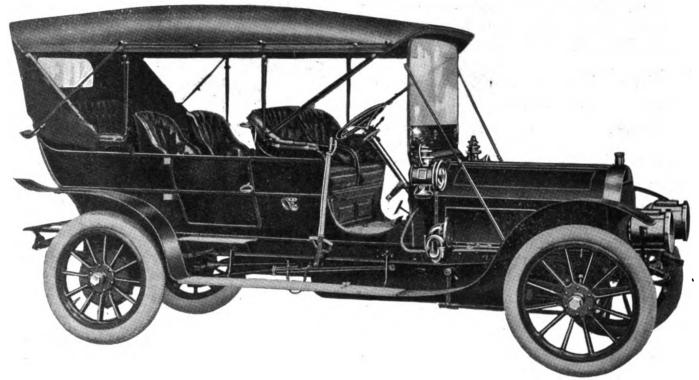
¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by A. SOHRADER'S SON., Inc., 28-30-32 Rose St., New York

WHY SIX CYLINDERS?



THE NEWEST GREAT ARROW SIX-CYLINDER CAR is the most luxurious and comfortable car running today, no matter what the country of origin. The feeling while riding in a six-cylinder car, even at a high speed, is exactly like that of coasting down a gentle grade with the clutch thrown out. This is felt not only on a level, but even when climbing a hill. There are four reasons why six cylinders are superior to four.

- 1. ABSENCE OF VIBRATION. This is due to a perfect balance of the engine. In a four-cylinder the propulsion dies down while in a six-cylinder it overlaps.
- 2. SILENCE. The six-cylinder car is more silent than the four, the exhaust, due to the rapid sequence of explosions, being practically continuous. The perfect balance of the engine also contributes to this quietness.
- 3. FLEXIBILITY. Due to a more constant torque obtained by the constant impetus of continuous explosions, giving an ability to run powerfully and smoothly at any speed, from four miles an hour to sixty.
- 4. EASE OF OPERATING. Owing to there being less necessity for changing gears, especially in traffic, as the six-cylinder car can be run much slower than the four when on the high gear.

These four points prove conclusively that the six-cylinder GREAT ARROW is as near the ideal motor car as modern mechanics can bring it.

> 4-cylinder Great Arrow, 30 H. P., Price, \$4,000 HERE ARE THE
>
> 1908 TOURING CARS
>
> 4-cylinder Great Arrow, 40 H. P., Price, \$5,000
> 6-cylinder Great Arrow, 40 H. P., Price, \$6,500
> 6-cylinder Great Arrow, 60 H. P., Price, \$6,500

THE GEORGE N. PIERCE COMPANY,

(Members Association of Licensed)
Automobile Manufacturers

BUFFALO, N. Y.

Roston, Mass.
New York, N. Y.
Chicago, Ill.
Pittsburg, Pa.
I hiladelphia, Pa.
San Francisco, Cal.
San Francisco, Cal.
Fortland, Ore.
Scattle, Wash.
Los Angeles, Cal.
Haltimore, Md.
Buffalo, N. Y.
Cleveland, Ohio.
Coming, N. Y.
Davenport, Iowa
Denver, Colo.
Detroit, Mich.
Fartford, Conn.
Houston, Texas.
Fansas City, Mo.
Louisville, Ky.

J. W. Maguire Co.

Farrolds Motor Car Co.

Harrolds Motor Car Co.

Harlolds Main Street

Harlolds Motor Car Co.

Harlolds Motor Car Co.

Harlolds Main Street

Harlolds Main Street

Harlolds Mass.

Harlold PIERCE DEALERS

Mohler & De Gress
American Auto. Co.
II. Paulman & Co.
Wilson Automobile Co.
Eliis Motor Car Co.
Wilson & Co.
Central Auto. Station Co.
F. A. Nickerson Co.
F. Ss. Hughes Motor Car Co.
U. S. Auto. Co.
Tom Botterill Auto Co.
Standard Motor Car Co.
E. R. Clark Auto. Co.
Mestern Auto. Co.
Jambert & von Tacky
Auto. & Supply Co., Ltd.
Troy Auto. Exchange
Binghamton Motor Co.
So. Automobile Co.
H. E. Frederickson
R. A. Blenner
nd Armee.

la Independencia 12
187 Wisconsin Street
217 Fourth Street, South
117 Craig Street, West
222 Halsey Street
142 Bank Street
55 West Street
142 Congress Street
142 Congress Street
1512 Industrial Trust Bldg
21 Plymouth Avenue
63 W. Third. South

461 Worthington Street 4701 Washington Blvd. 16 N. Franklin Street 24 Temperance Street 23 Fourth Street 172 State Street 105 S. Conception Street 2046-2048 Franklin Street 1607 West Broad Street

An automobile is, after all, simply a piece of machinery.

The man who buys an automobile without carefully considering its worth as a piece of machinery, lays up trouble for himself.

The exclusive mechanical merit of the Marmon urges a careful buyer to investigate it thoroughly before purchasing any automobile.

In testing it, he cannot help noticing its external as well as internal beauty, and its distinctive ease of motion—an exclusive feature which commends it to men who appreciate comfort and appeals even more strongly to women.

Model H. Touring Car, 40-45 H. P., \$3500 3500 Model H, Roadster, 40-45 H. P., Model G, Touring Car, 35-40 H. P., 3000



For catalog, address Dept. 16

Nordyke & Marmon Co., (Estab.) Indianapolis, Ind.

Boston, Mass., F. E. Wing Motor
Car Co., 12 Columbns Ave.
Philadelphia, Pa., Brazier Auto
Works, 38th and Market Sts.
Baltimore Md., Snodeal Automobile
Co., 2552 Madison Ave.
East Orange, N. J., Rickey Machine
Co., 02 Eaton Place.
Milwaukee, Wiss., John Ure, Jr., & Co., 172 12th St.
Indianapolis, Ind., H. T. Hearsey
Vehicle Co.

Desirable Territory for Dealers.

Note List Above

As It Was In The Beginning

Car is now and (I promise) ever shall be an honest Car - honestly designed - conscientiously built truthfully sold and in good faith backed up by its makers after it is in the hands of the buyer.

Times and conditions may change, but principles never do.

Maxwell principles of construction—chief among which are Thermo-syphon cooling; Unit Power Plant with three point suspension; and metal body,—are sound; all have been time-tried and road proven.

Here and there you'll find a maker who has adopted one or more of these Maxwell features, but only in Maxwell Cars do you find a combination of all of them.

I always feel sorry for the maker or sales manager who finds it necessary to contradict year after year all he has said previously, or who must devise new "talking points" to cover up past mistakes. I feel more sorry for the people who are beguiled into buying his cars.

Maxwell advertisements of four years ago expounded the same theories and principles as do those of 1908—and those of next year will be consistent with this. That's only one expression of Maxwell stability-it's one reason why Maxwell owners are such a contented lot.

Our catalog is free.

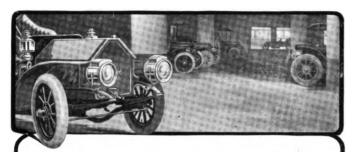
MAXWELL-BRISCOE MOTOR COMPANY

P. O. Box 106, Tarrytown, N. Y.

Members A. M. C. M. A.

Factories: Tarrytown, N. Y. New Castle, Ind.

Pawtucket, R. I.



The Car in when you put your car "in commission," you want it to "stay put." Good lubrication is almost the first requirement.

Avoidance of carbon deposits is of prime necessity. Both are accommission

plished by the use of ZEROLENE, the new friction-proof, trouble-proof, carbon-proof oil. This oil is produced in only one place in the world.

ZEROLENEAuto-Lubricating Oil

is made in only one grade. This one grade works perfectly in every type of gasoline engine, in both summer and winter. Leaves practically no carbon deposit, and keeps cylinders and spark plugs clean.

Sealed cans with non-refilling spout protect against substitution of inferior oils. Also put up in barrels for garage trade. Sold by dealers everywhere.

STANDARD OIL COMPANY (Incorporated)

The "Long-Arm" System Co. Cleveland, Ohio

We would like to send you our cuts and prices on

1909 Model Auto Parts

Axles (3 sizes), Clutches, Reaches, Buffers, Propeller Shafts, Hand Levers, etc.

Are you chamfering the teeth of your gears by hand or by some special rig which you are proud of and feel sure is quite the thing? We are finding a market for our

Automatic Tooth Chamfering Attachment

with just such people; the little money-saver is winning friends for itself and quietly making the superintendents and foremen "sit up and take notice."

Ask for our Bulletin 25

SALES DEPT.

AMERICAN DISTRIBUTING CO.,
American Trust Building, CLEVELAND, OHIO

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



A TOURING CAR IN THE TRUE SENSE OF THE TERM

The man who gets the most pleasure from his touring car is not the man who limits his touring to the macadam roads; for the most interesting sections of the country and those of the greatest natural beauty lie, for the most part, beyond the regions of improved highways. For that reason, there is no quality of a motor car more important than the ability to traverse bad roads.

In unique degree, the White possesses the qualities of a "bad roads" car. Owing to the perfect flexibility of the engine, the White tourist can accommodate the speed of his car, yard by yard. to the condition of the road, speeding up on each little stretch of good road, and slowing down for each hole and "thank-ye-ma'am"—without shifting of gears or any manipulation except of the throttle. The tremendous pulling power of the White engine under all conditions means immunity from getting stuck in the mud or sand. Running through deep water, as in fording streams, is easy for a White. And as for climbing grades in mountainous regions—there is no other machine which can approach the White in hill-climbing qualities.

Drive a White Steamer and see the country

THE WHITE COMPANY CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Philadelphia, 629-33 N. Broad St. Pittsburg, 138-148 Beatty Street.



WHAT THE MOTORIST GETS WHO SPECIFIES

MORGAN & WRIGHT TIRES

F. H. Croul, of Detroit, got the specifying habit two years ago, with the following result (letter to us under date of January 3d, 1908):

"On May 11, 1906, I purchased a Packard machine and specified your tires. These tires are still in operation on this machine, and outside of a few minor repairs have never been out of service.

"In the same month and year, I specified your tires on a Northern runabout, and have had the same experience with them, and at this writing they are in good order.

"On May 1st, 1907, I specified your tires on a four-cylinder Model C, Cadillac runabout, and at this writing they are in perfect order.

"All three of my machines are in use the entire year, and have been operated a great many miles.

"I am also pleased to inform you that the tires furnished Mrs. Ellen P. Croul on a large Welch machine are giving most excellent service, and she is much pleased with them."

You can have the same kind of service by using the same kind of tires.

GET THE SPECIFYING HABIT

MORGAN & WRIGHT, DETROIT

Branches, Agencies or Dealers Everywhere

One Price for Warner Auto-Meters

TEVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being obved. That was ourselves. But, unforserved. tunately, we sold to the jobber also - and the jobber cut the price.

Then there was fun in the camp. That hurt us - it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that hurt the consumer, the dealer and ourselves. For the jobber knows

no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co. 162 Wheeler Ave., Beloft, Wis.



TRY MILLER

This expression has developed into a trade term

THERE'S A REASON

The public, which in the past, has experienced difficulty in obtaining automobile supplies should give us a trial, by mail, or a personal visit.

We Carry in Stock the Largest Assortment of PARTS, FITTINGS AND SUNDRIES To be Found in this Country

Our Catalog, the most complete one of its kind, is an encyclopedia of motor car supplies; it is used daily by other supply houses and they could not get along without it. A copy mailed to any one on request.

Order from nearest Branch and save time and express charges.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE: 97-99-101 Reade Street,

O R

ES

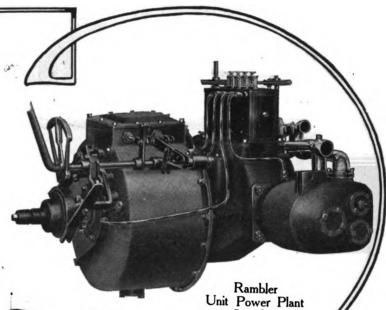
NEW YORK CITY

S T O

RES

The Greatest Advance

in two-cylinder motor construction since the advent of this type of car is embodied in the



Complete Model 31

The enclosed unit power plant is impervious to dirt, mud and water, and absolutely oil tight.

Thus, proper lubrication of all parts is assured and care and wear reduced to the

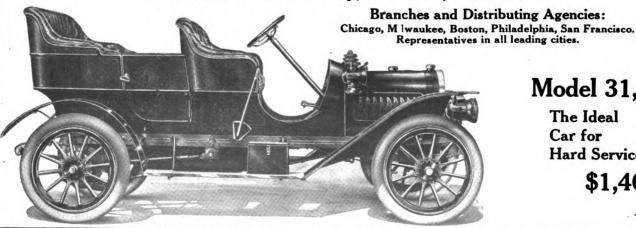
The car is built for hard service and the great number in constant use on the mud roads of the middle and western states fully proves its dependability under all conditions.

This capacity for hard service entails no sacrifice in outward appearance or riding qualities in which this model is second to none.

See this car and be convinced. Our nearest representative can show you.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin.



Model 31,

The Ideal Car for Hard Service.

\$1,400.

KELLOM MAKES A STRIKE IN OIL

Encounters a "Gusher" and Gets Facts Concerning "Substitution"—Several Dealers to be Prosecuted.

Due to the fact that Charles F. Kellom, head of the Philadelphia firm which markets Invader oils, recently went on a "prospecting" tour, it is extremely probable that eight of the Quaker City's dealers and garage keepers shortly will appear before the bar in the role of dependants. Not only did he "strike oil," but he discovered a "gusher" with a rich yield of the material he was after.

Convinced that fraudulent substitution was being practiced to an unwholesome extent, Kellom decided to obtain the proof necessary for legal proceedings. Accordingly, accompanied by two witnesses, in an automobile, he made the rounds of 13 garages, at each of which he called for Invader oil. As he was unknown to the garagemen, there never was any hesitation in supplying it, or at any rate what was represented to be Invader oil. At 8 of the 13 places visited the stuff supplied was not only not the genuine article, but it did not even resemble it, of which facts Kellom and his witnesses made due note. At one garage the Kellom party struck up such a cordial acquaintance with the attendant that he was thrown so completely off his guard that he became extremely confidential. He conducted them into the establishment and pointed to a barrel which did not contain Invader oil.

"We can supply Invader, or —, or —, and almost any other brand that may be called for," he vouchsafed, and with a smile added: "It all comes from that same barrel. The people who buy the oil don't know the difference."

The "gusher" was unaware of the identity of his visitors, and of course had no reason of suspecting that they did "know the difference."

The proof having been obtained Kellom & Co. now are preparing suits against the "substituting eight."

Mortgagee Arouses Banker's Wrath.

Albert C. Banker, a Chicago dealer, who has been in the limelight of publicity before, was placed under bonds of \$300 not to carry out his alleged threat to shoot Nicholas E. Ford, of Evanston, Ill. Ford claims to have a mortgage on some machines in Banker's possession, and sent a bailiff to Banker's place, 1424 Michigan avenue on March 30 to serve a writ of attachment. Later, when Ford called in person Banker refused to leave and made the alleged threat. The matter came up in court again on April 1, and Banker was discharged. The revolver found in his pocket was one that could not be fired.

Taxicab Sued for Selden Infringement.

The Association of Licensed Automobile Manufacturers has brought suit against the New York Taxicab Co., the New York Motor Cab Co. and Walter C. and Harry N. Allen, officers of those companies, for alleged infringement of the Selden patent.

As usual, the proceedings, which were brought in the United States Circuit Court for the Southern District of New York, were instituted in the name of the Electric Vehicle Co.

Grabowsky Organizes a New Company.

Having severed connection with the Rapid Motor Vehicle Co., Pontiac. Mich., of which he was one of the founders, Max Grabowsky has organized the Grabowsky Motor Car Co., in Detroit. Commercial vehicles, buses and sight-seeing cars, to which he long has devoted his attention, will constitute the product of the new enterprise.

Perrett to Manage New Detroit Branch.

W. M. Perrett, former manager of the Diamond Rubber Co.'s Detroit branch, will not long remain out of business. He has engaged to become manager of the Empire Automobile Tire Co.'s depot which will be established in Detroit on May 1st.

MUST KEEP OFF OF "TAXICAB"

New York Company Claims Word is a Trademark Which Must be Respected —General Warning Issued.

According to Ellis Lord, of the firm of Alexander & Colby, attorneys for the New York Taxicab Co., each and every member of the army of promoters that seized on the word "taxicab," "taxacab" or anything else that resembles the word, must needs "guess again," that is to say, find another name for their respective taximeter cab companies. For the New York Taxicab Co., claiming to have coined the word, have laid legal claim to it as a trade mark or trade name and Alexander & Colby have been engaged to enforce the claim.

Mr. Lord states that two companies already have changed their titles because of the New York company's attitude and that preparations are now being made to force the fight all along the line. To that end, a sweeping general notice will be issued early next week warning all persons and corporations against the use in any manner, shape or form of the word "taxicab" in respect to motor cabs or vehicles of any other kind. As the New York Taxicab Co.'s chief competitor styles its vehicles "taxacabs," Mr. Lord was asked whether his clients claimed that form of spelling the word was an infringement of their rights. He promptly responded in the affirmative. The general warning that will be issued, summarizes the Taxicab Co.'s claim as follows:

"That the word 'taxicab' has been duly adopted by the New York Taxi-Cab Co. as its trade mark; that said trade mark is a new coined, arbitrary word, invented on or about May 9th, 1907, in behalf of said company and continuously used by said company since said 9th day of May, 1907, the date of its certificate of incorporation, which was duly filed in the office of the Secretary of State on May 10th, 1907; that

statutes.'

said company on or about October 11th. 1907, filed its application for the registration of its said trade mark 'taxicab' in the United States Patent Office, pursuant to the statutes of the United States in such cases provided; that said application was marked in the Patent Office with the serial number 30.547; that the same was thereafter passed by the Patent Office for publication and published in the Official Gazette of December 17th. 1907, and was duly allowed on January 20th, 1908; that thereafter and on or about February 18th. 1908, the said Patent Office duly issued to New York Taxicab Co. a certificate of registration, number 67,700, whereby the word 'taxicab' was duly registered in the Patent Office as the trade mark of said

Standard Welding in Its New Factory.

company, as provided by the United States

The Standard Welding Co. has taken possession of its new plant at W. Seventy-sixth street and the Lake Shore tracks, in Cleveland. The new plant is of brick and steel construction with the "slow burning" type of floors. The main building is 450 feet long by 50 feet wide and three stories high, and the saw tooth structure attached is 75 feet wide by 450 feet long, with basement, giving 100,000 square feet of floor space. The power house is equipped with 1,500 horsepower boilers and engines. There are pumps, air compressors, etc., and the latest style of automatic stokers, coal and ash handling systems, etc.

Penney Gets Out of the Imperial.

Comus B. Penney, of Buffalo, N. Y., has turned over to the Buick Motor Co., of Flint, Mich., his entire interest in the Imperial Motor Co., at 1094 Main street, which will become an exclusive agency for Buick cars. The change resulted from the desire of the Buick people to turn the Imperial Motor Co. into such an agency and Mr. Penney's disinclination. Finally, he offered to buy the other interests or sell his own, and the latter proposition was accepted. Penney has been prominent in the trade in Buffalo for the past three years.

Continental Caoutchouc Moves Uptown.

The Continental Caoutchouc Co. have made a long jump—from 43 Warren street to 1788-90 Broadway, which is at the corner of Fifty-eighth street, New York City, where their general offices and sales room new are located. The new location is in the heart of the up-town automobile district and affords ample "elbow room."

Mooers Takes Leave of the Moon.

L. P. Mooers, of the engineering staff of the Moon Motor Car Co., St. Louis, has severed connection with that concern. He already has matured the design of a popular priced car and it is not improbable that a new company will be formed for its manufacture.

THE MOTOR WORLD

The Week's Incorporations.

Rockland, Ill.—Joslyn Automobile Co., under Illinois laws, with \$5,000 capital. Corporators not named.

Chicago, Ill.—Chicago Auto Livery Co., under Illinois laws, with \$1,000 capital. Corporators—P. G. Bell, R. M. Cutting, E. F. Kemper.

Chicago, Ill.—Webb Jay Motor Co., under Maine laws, with \$500,000 capital. Corporators—J. E. Manter, president; C. E. Eaton, treasurer, Portland Me.

Norristown, Pa.—Wildman Motor Car Co., under Pennsylvania laws, with \$25,000 capital. Corporators—Horace C. Coleman, Elihu R. Roberts and Frank B. Wildman.

Camden, N. J.—Standard Automobile Co., The, under New Jersey laws, with \$100,-000 capital. Corporators—Richard H. Stamper, Reuben Miller, David H. Goff.

Los Angeles, Cal.—Taxicab Co., under California laws, with \$100,000 capital. Corporators—Don E. Murphy, Walter J. Wren, Frank Spar, James Slocum and Donald Barber.

Detroit, Mich.—Rae Electric Co., under Michigan laws, with \$50,000 capital, to manufacture automobiles. Corporators—F. B. Rae, J. J. Gillette, J. H. Livsey, William Lucking.

Wichita, Kan.—Wilson Automobile Co., The, under Kansas laws, with \$25,000 capital. Corporators—Henry A. Wilson, W. S. Fowler, Thornton Sargent and J. M. Fowler.

New York City. N. Y.—Auto-Security Equipment Co., under New York laws, with \$27,000 capital. Corporators—Woolsey A. Shepard, William P. Hammond and Theodore M. Hill, 111 Broadway, New York City, N. Y.

Rochester, N. Y.—Horton Boat, Engine and Supply Co., under New York laws, with \$75,000 capital, to manufacture boats, engines. automobiles, etc. Corporators—L. La V Horton, C. D. Larabee, M. A. Brush, Rochester, N. Y.

New York City, N. Y.—Braunwarth-Wallace Co., under New York laws, with \$2,000 capital, to deal in automobile parts. Corporators—Otto Braunwarth, Francis J. Wallace and William J. Masters, 1900 Broadway, New York City, N. Y.

In the Retail World.

Claude S. Cameron and H. Duras will open a garage and repair shop in the Dodd building on West Main street, Milwaukee, Wis., about April 15.

W. B. Jernigan, of Pine Barren, Fla., will open a garage and sales room at Pensacola. He will handle the Franklin line exclusively.

Joe Downey has secured the garage at Magnolia, Mass., and will keep on hand half a dozen cars for summer visitors to that resort.

J. M. Padgett is to open a wholesale

house in Topeka, Kan., for the handling of tires and other supplies. It will be located at 118 East Seventh street.

George H. Kimball and George H. Emerson have become partners in a new automobile brokerage firm in Boston. They are located in the Motor Mart.

Farmington, Iowa, now has a fully equipped garage, owned by Kelley & Co., and managed by Charles Cleave. A repair shop is included in its conveniences.

H. W. Dimmitt is fitting up a garage at Wymore, Neb., where he will conduct a transfer and livery business. A repair shop will be operated in connection with the business.

The Mason City Auto and Supply Co., Mason, City, Iowa, of which W. O. Campbell of Waterloo is owner, has opened a new garage on South Main street. F. B. Bryant will be the manager.

The Brown Brokerage Co., Coffeeville, Kan., have taken possession of a splendid new modern sales room and garage. It is concrete and brick, 60x175 feet. The Franklin will be made one of its features.

F. R. Pendleton has removed the Cartercar agency in Boston to the quarters in the Motor Mart vacated by the Corbin company. The local company has reincorporated under the name of the Cartercar Co. of Boston.

The North End Auto Co. has opened a garage at 19 East Buena Vista street, Colorado Springs, Colo., to be devoted exclusively to electric vehicles. A. R. Flagler, an expert electrician, is manager. Complete charging and repair apparatus has been installed

George Brewer and George Wilcox, Jr., of Athol, Mass., are reported to plan altering the old Brewer toy factory in that town to make it a first class automobile station. The upper story will be fitted up as a repair shop, the lower floor being used for storage of cars.

The Broadway Auto Co., of Detroit, Mich., is completing a large garage at Mott avenue, near Woodward. The building is fireproof and is in two sections, one being for gasolene cars and the other for electrics. The capacity will be for 50 of the former and 25 of the latter. All the equipment will be of the most improved character. E. D. Hutchinson is the manager.

The affairs of the Boyer Motor Car Co., San Francisco, Ca., who failed several weeks since, are being wound up. This company suffered two fires during last year and was unable to successfully pull through the financial panic. Boyer himself has become identified with the Consolidated Motor Car Co., 402-406 Golden Gate avenue, who have taken on the Franklin line, which Boyer previously handled. They will be exclusive Franklin dealers. The officers of this concern are: S. G. Chapman, president and manager; J. H. Doust, vice-president; Max L. Rosenfield, secretary.

BIG CROWD AT PITTSBURG SHOW

Many Exhibits in Uniform and Artistic Setting—Local Makers Stage Two New Cars—The Exhibitors.

Pittsburg's "show week" is on. It was ushered in Saturday afternoon last, 4th inst., and by evening all but the usual delayed-in-the-freight exhibits were in place, the decorations set in order and everything ready for what was called a record crowd for Duquesne Garden, and estimated to number 10.000 souls.

The scheme of employing only uniform decorations, and of eliminating advertising signs and also noise-making devices in general has been applied with particularly good effect. The "official" colors are red and white, and with a touch of gilding here and there, they have been disposed throughout the building in bunting, papier mache statuary and ornaments. By way of variety, 24 mural paintings depicting scenes in which the motor car figures with suggestive prominence are placed about the walls in orderly fashion, while the booths themselves are touched off with floral decorations. The foyer entrance to the main hall is guarded by a huge eagle with outstretched, gilded wings, which looks toward the far end where the musicians' stand is presided over by the familiar "Motor Girl," larger than life and bearing aloft the illuminated, winged wheel of pet symbolism.

The exhibits number the usual assortment of cars, accessories and also an adjunctive display of motor boats. In respect to cars of prominence, the industry is well represented, Pittsburg being an enthusiastic and discerning "automobile town." There are more than half a hundred exhibits in all, and of these more than half are exhibits of cars.

Two entirely new cars of local manufacture are shown for the first time. One is the Belden, made by the Belden Motor Car Co., which is a six-cylinder, 40-60 horsepower touring car of entirely new and original design, embodying a number of novel mechanical features. The cylinder dimensions of the motor are 4% by 5 inches, the valves are mounted in the cylinder heads, the mounting is of the three-point order, ignition is by Bosch magneto. The transmission is by sliding change gear affording four forward changes of speed with direct on the third, and shaft drive to the live rear axle. The car weighs 2,800 pounds when equipped with the touring body, and is presented in a variety of other mountings

The Fort Pitt Manufacturing Co., New Kensington, Pa., are showing for the first time the new Pittsburg Six—which is all that its name implies. It is a Krupp steel car, built on foreign lines, after designs by

the "old masters," interpreted by an imported designer. Though generally conforming to the best known lines of current practice, it evinces considerable right to distinction in the rating of its sextuple motor which is catalogued at 54-72 horsepower.

The show will continue until the end of the week. To-day: (Thursday) is Society Day at \$1 a head. Among the exhibitors of cars are the following:

Allegheny Automobile Co., Pierce, Racine, Rapid Truck; American Automobile Co., Pope Hartford, Pope Waverly, Pope Tribune; Arlington Motor Car Co., Jackson, Acme; Banker Brothers Co., Pierce Arrow, Stevens Duryea; Belden Motor Car Co., Belden: Bellefield Motor Car Co., Couple Gear Freight Wheel Truck, De Luxe, Pennsylvania; Bensen, B. F. & Co., Rapid Motor Vehicle Truck, Rainier; Collins, D. P. & Co., Lozier, Moon, Studebaker electric; Colonial Automobile Co., Pope-Toledo, Apperson, Baker electric; Central Automobile Co., Reo, Premier; Diamond Automobile Co., Buick; Fort Pitt Automobile Co., Locomobile, Oldsmobile; Fort Pitt Manufacturing Co., Pittsburg Six; Hiland Automobile Co., Peerless; Iams Motor Car Co., Royal Tourist, Corbin; Imperial Motor Car Co., Cadillac; Keystone Automobile Co., Welch, Stoddard-Dayton, Columbia electric; Liberty Automobile Co., Mitchell, Wayne, Mora; Pittsburg Motor Co., Pittsburg Truck, Babcock Electric; Miller Bros., Model; Standard Automobile Co., Packard, Franklin; Schroeder Automobile Co., Payne-Modern, Cameron; Wilkinsburg Automobile Garage, Elmore; Winton Motor Carriage Co., Winton; The White Co., White steamer.

The accessory exhibits include those of the Acetyvone Co., lamps and generators; Atlantic Refining Co., lubricants; Air-Tight Steel Tank Co., gas tanks; Auto Igniter Co., ignition devices; Automobile Specialty Co., wind shields; Barcus, J. C., Farina, Ill., accessories; Bowser, S. F., Co., gasolene storage systems; Banker Bros. Co., wind shields; Doubleday-Hill Electric Co., electric supplies; Diamond Cycle Co., Indian motorcycles; Diamond Tire Co., tires; Echo Horn Co., horns; Firestone Tire Co., tires; Fisk Rubber Co., tires; Gabriel Manufacturing Co., horns; Goodrich, B. F., Co., tires; Goodyear Rubber Tire Co., tires; Gibney, James L. & Co., Continental tires: Hartford Suspension Co., shock absorbers.

Makers to Support Three Contests.

Nine members were present at the regular monthly meeting of the executive committee of the National Association of Automobile Manufacturers in New York yesterday. Their only transaction that did not smack of purely routine business was a resolution to support three competitive events during the year—an open road race, a stock car race, and a touring contest, which is generally interpreted to mean the Vanderbilt cup race, the Briarcliff race and the Glidden cup contest.

SURPLUS STOCK SYNDICATE STARTS

New Bargain House Venture with Familiar Features—How the "Surplus Stock"

Compares with Announcements.

The automobile carnival brought more than flags and bunting, more than a king, a queen and their suites to New York. Among other things, it brought the Automobile Surplus Stock Syndicate "of New York, Buffalo and Chicago."

Not only the high sounding name, but the cymbalic manner in which the syndicate advertised its wares was so full of suggestion that it induced an investigation which, however, failed in its purpose of disclosing the identity of "13 manufacturers of supplies" who had sold their "surplus stock" to the A. S. S. S. as the advertisement proclaimed.

The "New York branch," which located itself on upper Broadway, is not in a pretentious place for a concern with such a sweeping title. The frontage is about 20 feet and the depth of the store about 50. In it is contained a miscellaneous assortment of automobile accessories, the appearance of which seemed to indicate that they had once been in the possession of other persons before coming into the "Syndicate's" hands. In fact one of the two attendants who appeared to control the destinies of the "branch," asserted that the stock of old accessories of a well known Buffalo automobile manufacturer had been purchased outright. To the stock obtained frim this source had been added a few bushel baskets full of odds and ends, a few tires, and a half dozen bicycles from which the name plates had been removed, though the screws which had held them in place had been returned to their respective holes.

Though the advertisement stated in detail ten different specified articles to be sold at greatly reduced prices and mentioned "fifty other articles too numerous to mention," the store did not look large enough to contain fifty articles of any considerable size.

The firm's business card bears the legend "automobiles and supplies bought for cash or sold on commission."—a statement which may account for the presence of two automobiles which were in the show room that at first sight were thought to be designed for the antique section of the carnival parade until it was stated that they were for sale.

While the Motor World man was in the "syndicate's" branch a piece of mail addressed to "Mr. Preyer" was delivered by a postman. A man of that name was once connected with the Manhattan Storage Co., and other similar establishments, but according to current reports, not the storage company, but one of their kind, comprises the "surplus syndicate."

Three Thousand Miles on High Speed

through heavy snow, slush and mud; drifts in Michigan that blocked railroads and at Cincinnati up the famous Indian Hill of 24 per cent. grade with absolutely no slow speed, intermediate speed or reverse, is the record of the Thomas-Detroit Forty "Snow Bird" which is equipped with

TIMKEN Roller Bearing Front and Rear Axles and Transmission Bearings



The E. R. Thomas Detroit Co. write:

The E. R. Thomas Detroit Co. write:

"This performance is really marvelous, and the first time that any car has ever attempted a feat of this type. Previously, short runs have been made by various cars with the high speed lever locked in, but the idea of driving a car with nothing but high speed gear, across country in the winter time, has been deemed impossible and never attempted before by any manufacturer. It certainly shows abnormal power in the car and very little loss in the transmission of power from the motor to the wheels. It is a compliment to the TIMKEN COMPANY as well as ourselves."

TIMKEN ROLLER BEARINGS

represent the highest point of perfection as yet attained in the finished steel maker's art in addition to a special knowledge of loads and tractive require ments and how to provide for them.

This tells why the makers of over 60 per cent. of all high grade American Automobiles and 95 per cent. of the Trucks made in this country recognize

The Timken Principle Correct and The Timken Quality Supreme

We have important data on loads and haulage of vital interest to everyone who builds or owns a vehicle. Sent gladly on request.

The Timken Roller Bearing Axle Company, Canton, Ohio 10 E. 31st Street, NEW YORK

429 Wabash Avenue, CHICAGO

TO THE TRADE:

Changes in the trade which occurred since January 1st, also additions in the technological section of the International Motor Cyclopædia, will be published as Supplement No. 1 in Automobile Topics of May 2d. Any changes or additions to appear in the paragraphs now in the International Motor Cyclopædia should be sent in immediately.

Address COMPILATION DEPARTMENT

INTERNATIONAL MOTOR CYCLOPÆDIA

Times Building, NEW YORK

REMOVAL NOTICE

From April 15th the Offices of the International Motor Cyclopaedia will be Terminal Building, Park Avenue and 41st Street, New York



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street
NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

LT Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 9, 1908

"It is with much pleasure that I enclose my check for renewal of my subscription for the Motor World. Of Motor, Horseless Age, Motor Age, The Automobile, the Automobile Trade Journal, and a Cleveland monthly, I much prefer the Motor World. You have my best wishes."—Robert C. Crowthers Automobile Co., Cincinnati, Ohio.

Passing the Palm to Hower.

When, between blush-provoking compliments heaped on his precious head, his press bureau let it be known that Chairman Hower, of the A. A. A. Touring Board had in the new rules answered every criticism and removed every objection that ever had come of a Glidden touring contest, few suspected the manner in which the modest Hower had made his answer. This did not become apparent until this week, when the revised rules were made public. They make plain that it is not Mr. Glidden's contest, or an A. A. A. contest or even a

touring board's contest. It is a project of, for and by Mr. Hower. The rules are fairly studded with evidence to this effect. But of the entire collection of gems of surpassing authority, none other can even mildly compare with this one.

"The Chairman of the Touring Board reserves the right to alter or amend, suspend, or repeal these rules from time to time, up to and including the end of the tour and final award, as may in his judgment be deemed expedient."

We are not unmindful that wide scope is necessary in contests of the sort, but in a quarter-century's experience with sport, we can recall absolutely nothing that is even remotely fit to be mentioned in the same breath with this definition of the "whole thing." The rule quoted is the limit—not merely the extreme limit by the extremest limit. It entitles Mr. Hower to every leaf in the laurel wreath. It creates a new standard for competition.

During all previous generations it had been supposed that rules were formulated for the guidance of both officials and contestants in order that they might know exactly what they should do and what they should not do, the officials being appointed merely to enforce the rules as laid down and not such rules as they may happen to think should be laid down.

Mr. Hower merits unstinted congratulation for pointing the way to a newer and higher order of things-for showing how to build up a set of rules and then rendering them not worth the paper they are printed on; he merits as much admiration for having the cast iron courage to set himself on a pedestal and pointing to himself as "the whole thing." As the rules are Hower and Hower is the rules, why the expense of printing them was incurred is past understanding. What will happen to the contest if anything happens to Hower, is the one thing that is not made perfectly clear although it must be admitted that what may happen to a contestant who should chance to indulge in "back talk" or who may encounter Mr. Hower if the latter suffers indigestion or stubs his toe, is also a matter for conjecture.

Control of the Motor.

Governing, in the sense of automatically regulating the power output of the motor by keeping its speed down to certain definite limits, though at one time almost universally employed, is now used only by a

comparatively limited number of makers, and is regarded as a useful, though by no means necessary refinement. Governing, in the broader sense of controlling the power output of the motor, either by hand or automatically, remains, even yet, a point open to any amount of discussion.

At present, the average designer recognizes but two basic methods of controlling the motor. One, by means of the spark advance, and the other by means of the throttle. The former, however, is recognized as being unsatisfactory and wasteful if employed by itself, while the latter cannot be used entirely independent of the former.

Of the methods of throttling the gas, there are several in use, the most common being the simple regulation of the area of the intake pipe from the carburettr. Another, which possesses numerous advantages over this, consists in regulating the lift of the intake valves, or else the duration of their opening. Engineers who are inclined to be more or less radical have been struggling for several years with other methods, notably those hinging about the variation of the output in accordance with variations in compression, as well as volume of charge.

Mechanically, this latter idea is most difficult to encompass. The use of movable cylinder heads, variable strokes, variable compression spaces brought about by the use of separate cylinders employed solely for this purpose, and the practice of retarding the closing of the inlet valves until a portion of the mixture has been forced back into the manifold, all have been tried, or at least laid down on paper as being considered more or less feasible. The system employed on the Adams-Farwell motors, in which a portion of the gas is returned to the intake manifold when low powers are required, is perhaps as simple, mechanically as any yet propounded, though applicable only to the peculiar motor formation on which it is used, to all appearances. The principle of the Roche motor, recently described in these pages, offers the opposite extreme in the mechanical sense. Perhaps the theory of the Laval and Jallut motor, which is described elsewhere in this issue is as appealing as any which has yet appeared, though its mechanical drawbacks are numerous and very evi-

In any case, the ideal, is to cause the motor to work at as great or nearly as great



efficiency at low speeds as at high, and with equal certainty and uniformity of action. This, the simple manipulation of either spark or throttle, or both does not and cannot do. It may be argued that the present types of motor are sufficiently flexible for all practical purposes, and that time spent in devising a more perfect method of governing is time wasted-at least so far as the automobile motor is concerned. But it is to be remembered that the solution of the problem of perfectly efficient governing means the elimination of the change speed gear. That in itself is sufficient incentive for a great deal more of time and labor than the problem has ever yet received.

The Chauffeur and His Work.

Clean running gear and bright polished brass work do not necessarily imply that the man in charge of the motor car is possessed of the instincts of the true mechanic. Too often an inspection of a car, the outward appearance of which is all that can be desired, will reveal that, while care has been bestowed on the parts that are visible, the more important, but hidden features have been so neglected as to seriously interfere with the efficiency of the power plant.

The chief interest of the driver who possesses real mechanical instinct, will be centered on the engine and working parts of the vehicle. While it is natural that his main concern should be the efficiency of the power plant, his interest will not stop there; he will not be satisfied merely because "the wheels go round," but will take pains to have them "go round" under the most favorable conditions, and such conditions do not pertain where oil, that has been spilled on the engine base and other parts, is permitted to remain there to catch and retain dust and dirt.

It safely may be assumed that a chauffeur is competent for his work if an inspection of the engine and running mechanism of the car is made at a time when it is entirely unexpected by the man in charge, and the moving parts are found to be as clean, comparatively, as the lamps and visible brass work on the outside. The man who will keep his valves ground, who will take care of the other details of the machinery and will keep the whole of it clean and free from dust or oil will also use care and neatness in packing away his tools and accessories. In a car cared for

by such an individual, the spare inner tubes will not be found knocking around in various places under seats, etc., but will be kept in a place by themselves where oil and tools will not be brought in contact with them. While the owner of a car may find entire satisfaction in the fact that the body finish is unscratched and the brass trimmings shine with the brilliancy to be obtained only by oft repeated rubbing, he will do well to look further and by occasionally raising the hood and inspecting the condition of the outside mechanical parts he may find a way of cutting down maintenance expense by discovering that his driver, while attending to comparatively unimportant details that are visible, is totally neglecting the important and expensive features which are hidden from sight and therefore are being neglected.

The Smoke and the Smell.

Wholly incident to its chief purpose and effect, the New York Carnival parade served as a most convincing demonstration of the need of suppression of the smoke evil. To the observer stationed along the line of march one of the most lasting impressions of the pageant was that of the fumes from the motors. He went home with an oily taste in his mouth and the pungent odor of half-burnt petroleum in his nostrils. Because it was needless as well as disagreeable the offense was all the more deplorable, coming as it did when the cars were, so to speak, on their good behavior.

Oil is never fed to the motor to be burned up or driven out of the exhaust in the form of a murky haze. Its purpose is solely that of a lubricant, and that purpose is overthrown just as soon as actual burning occurs. One of the chief purposes of the cooling system which is a part of every motor equipment is to keep the cylinder temperature sufficiently low so that the vaporization of the oil shall be kept down to a minimum. The properly designed and properly conditioned motor will not smoke unless an excessive supply of lubricant is given it. The fact that the public does not protest at the constant offense of so many cars in this respect probably is due alone to the fact that the gratuitous nature of its existence is not appreciated.

The campaign for rationalization of the use of acetylene headlights in the city has been carried forward until the real of-

COMING EVENTS

April 4-11, Pittsburg, Pa.—Pittsburg Automobile Dealers' Association's annual show in Duquesne Garden.

April 6-11, New York City.—New York Automobile Trade Association's carnival week.

April 11, San Francisco—California Automobile Dealers' Association's hill climb.

April 16-18, Memphis, Tenn.—Automobile show promoted by the Automobile Dealers' Association of Memphis, in the Auditorium.

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 30. Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

fenders are rare exceptions to the rule and openly held among automobilists of the better class to be violating the rules of "good taste." What at one time! threatened to become a just cause for prohibition is thus removed from the field of possible municipal enactment and without unpleasant court proceedure or legal blood-letting. The same sort of spirit which led to this happy result may also be applied to the suppression of the smoke evil, and with equal effect if applied in proper season.

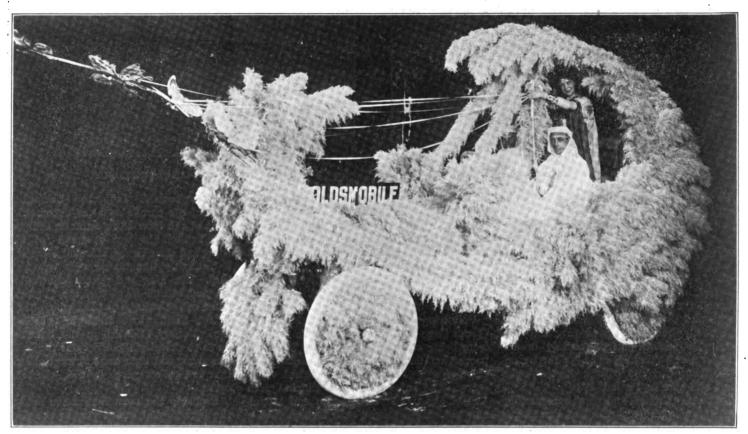
Compared to the glaring headlight the smoke nuisance is almost as serious because it is confined to no limited period of day or night, and because it polutes the city's atmosphere, which at best is never too wholesome. Worse yet, as it is not confined to any one make or style of car, it constitutes an indictment against the whole range of motor driven vehicles.

What next will the automobile organizations give in exchange for practically unlimited speed? There can be small sympathy for certain sections of the new bill introduced at the instigation of the New York State Automobile Association; there should be none at all for that portion of it which would require that the name of the automobilist convicted of whatever offense be "posted" in every county in the State. Not even thieves and nurderers are subjected to such degrading treatment.

AUTOMOBILE HISTORY IN A CARNIVAL PAGEANT

Illustrative Parade the Inaugural Feature in New York's Celebration of a Completed Decade in the Development of the Industry—Many Examples of Early Types in the Long Procession and at Least One Superbly

Decorated Car—Immense Crowds Wait for Hours Along the Route.



GENERAL CUTTING'S SUPERB PRIZE WINNER-ANTHONY AND CLEOPATRA

When any one tells you that the Easter clothes parade on Fifth avenue, the election night celebration, or the New Year's Eve jamboree, according as one feels about it, is "the thing" to coax the New York villagers out on the streets, just make answer with any quotation from Shakespeare that ends with "Go to!" for it isn't so. On Tuesday night of this week occurred the biggest industrial display ever witnessed in New York City. It was the semi-illuminated parade promoted by the New York Automobile Trade Association as the feature of the carnival week. As an industrial display it was the "biggest ever," but as a parade that took all night to pass a given point it was not the most orderly or the best managed ever held. The trouble was that it was just a little too large for the marshals to handle, there being just 738 machines of more than half that number of varieties in the line of run.

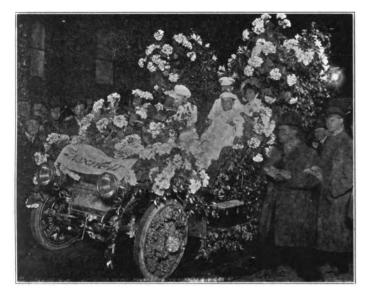
Broadway, that portion of it from Twenty-sixth street to 110th in Harlem, smelled like the Jericho turnpike at half-past nothing at all on the morning of a Vanderbilt cup race. There were touring cars and runabouts, new and old; motorcycles, rubber-

neck wagons, and Fifth avenue buses, to say nothing of more than a hundred commercial vehicles and a few boys on roller skates. And besides all the kerosene cars in Greater New York, including one from Flatbush, there were so many taxicabs that there couldn't have been one left on the side streets or in the garages. No one had time to go and see, but all agree that all the garages must have been untaxicabbed while the parade was in progress.

If one climbed on the window ledges of the Broadway shops, or could get close enough to the curbs, one couldn't see anything on the sidewalks and street but people and automobiles. Several crowd estimaters figured the former at 500,000, but this is a mistake, as only 498,627 people saw the procession. A man who has never had a gown or a lingerie hat built for himself, isn't much of an authority on the fashions, and couldn't say, after reviewing Tuesday night's procession whether this is a green, blue, yellow, cherry, tan or Iemon spring. As a matter of fact, it seemed to be an automobile spring. Most of the girls in the parading cars wore white, and as even the drivers and men folks in the

White steam cars affected this color, it would seem to appear that white is the au fait thing this spring. The lids were, as usual, about as irregular as a raise in salary, but the leaning-tower-of-Pisa-shapeddomes prevailed. It may be remarked in passing that one Sweet Thing in the vicinity of Eighty-seventh street wore ordinary turkey feathers in her head dress. The Sweet Thing couldn't see the cars very well from the sidewalk on account of the horrid people lining the curb, so she climbed up on the pedestal in front of a cigar store where posed a wooden Indian with a bunch of cheroots in one outstretched hand. The Sweet Thing wasn't sure of her footing, so she simply had to put her arm around the waist of the Indian, while her turkey feathers mingled with the plumes in his war bonnet-it was perfectly proper, you know, cause mother was right near-and although horrid people laughed she saw the parade from a good vantage point, if it was a bit embarrassing.

* The parade was to have started at 7.30 from Columbus Circle, but just at that time "Queen Joan" Newton Cunco and "King Leonard" K. Clark, discovered that the for-





"THE QUEEN" AMID THE LILIES

BENJ. BRISCOE'S SECOND-PRIZE WINNER

mer's little boy Antonio was missing. After a long search he was discovered in the coat room playing jacks with "Billy," the bell hop, and as they both were needed in the royal coronation which followed, why, the parade simply had to wait until Antonio could be found. When General John T. Cutting, of the Oldsmobile company, crowned the king and queen with befitting speech and the Queen had taken her place in the lily bedecked Mora car, and the King, who looked perfectly lovely in his crimson robes, mounted his high throne on a Waltham car, the parade started—only about one hour and a half late.

Columbus Circle, and the surrounding side streets where the paraders assembled, or at least made a bluff of assembling, had in the interim become jammed with sight-seers. Some of them got tired of waiting for the procession to commence, but as soon as they left, their places were filled, so there was no vacant standing room for any length of time. The formation was a sight worth seeing even if it was somewhat

confused. All the intersecting streets were kaleidoscopes of color, the white glare from the headlights on the cars being relieved by frequent flare of red light torches held by the watchers. Spiral streaks of color curled out over the heads of the spectators as rolls of paper were let go from second story windows, and confetti showered down upon them.

Following the arrival of the King and Queen there was a long wait while the cars were being steered into line, and when the procession finally moved down Broadway there was a cheer from the patient sightseers. The royal chariot in which Queen Cuneo, her two small children and attendants sat, was arranged as a throne, with a crown-shaped canopy, decorated all over with American beauty roses and Easter lilies. The wheels were concealed by clusters of roses. Immediately following the queen was King Clark-who in every day life is a taxicab superintendent-garbed sumptuously in crimson robes, with heralds, carrying long trumpets, standing on

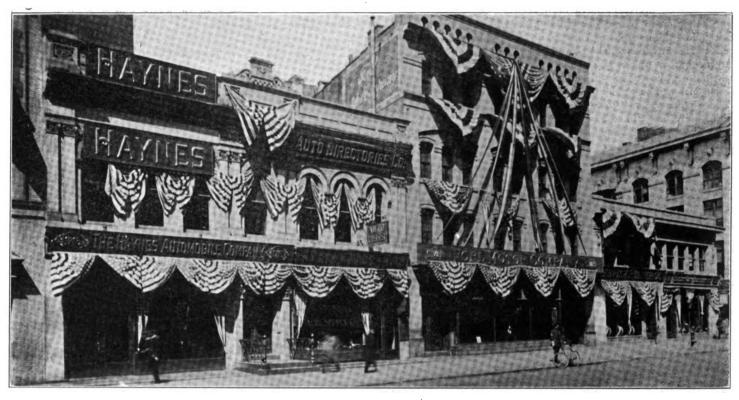
the footboards. Inspector Schmittenberger led the parade in a car decorated with flags of the New York Athletic Club, while just behind him was a squad of bicycle cops, and then Grand Marshal Howell with a brilliantly illuminated sign giving his title. The king and queen followed Howell, and behind them was the Haynes machine of the vintage of 1893, which has been in the Smithsonian Institute at Washington. Barney Oldfield, in the Stearns car he is to drive in the Briarcliff trophy race, was next, and then came several other cars that are to compete in the Westchester event.

Probably the most instructive section of the parade, and which was in the first division, was the exhibit of Haynes and Autocar types for a decade. Each company had ten cars of the corresponding years in line, and they illustrated vividly the progress of automobile manufacture in America in ten years. One bystander was provoked to remark that the "automobile industry is like Topsy—it just growed." Other his-





TWO OF THE GROTESQUELY DECORATED CARS



CARNIVAL DECORATIONS ON "AUTOMOBILE ROW"

toric cars were a White of 1900, which ran from Troy to New York to participate in the carnival; three Panhards of 1898, 1899 and 1900; an 1895 Apperson; a ten year old Buick, a number of curved dash Oldsmobiles; a Welch of 1901; the Mercedes which won the ill-fated Paris-Madrid race in 1903; the De Dietrich which finished first in the Coupe de la Prese; the Pullman which ran from Philadelphia to Savannah; the Frayer-Miller which won the Long Island economy test; the Matheson hill climb winner, and the 12-cylindered Maxwell, besides several others of racing fame.

By the time the parade started, Columbus Circle was a-bustle with activity, redolent with gasolene and patchouli and coughing gasolenically. The line of march was down Broadway to Twenty-sixth street, turning up Fifth avenue to Fifty-seventh, where Broadway was again touched. After circling Columbus circle the procession moved up Broadway to 110th street, turning and returning down the other side of Broadway until Eighty-fourth street was reached, where the paraders crawled in review before Judges Hoyt, Scarritt, Wheeler, Morrell and Parker, who were to pass upon the most beautifully decorated and the most grotesque cars.

By the time the parade got to the reviewing stand the divisions had become slightly mixed. This was the unfortunate part of the affair. When the flower of the younger set began to exude from the stage doors after teacher tapped the dismissal bell, at nearly 11, their eyes ablaze with the innocent merriment that one sees only on the facets of a cut glass shell of pilsener or in the animated orbs of a young maiden

whose mother has given her permission to stay out as late as she likes, so long as Hazel and Pearl and the other girls are going, not one of them but expected that the parade had long since disbanded, They were agreeably disappointed, for it wasn't over until about midnight. This was the mistake some other persons along upper Broadway made. When all the antiques and racing cars in the first division had



"THE KING" ON HIS MOVING THR . . .

made the turn at 110th street, and the 1908 models had taken another hour to do the same thing, the biggest part of the crowd thought the affair was over, and consequently were disappointed at not seeing the decorated cars and floats, of which there had been so much talk and expectancy.

It was a long wait after the ordinary cars had raced with each other up Broadway until the decorated section appeared, and the crowd had thinned considerably. Those who waited were rewarded, for the decorated cars, although there was not a great number of them, and the division of commercial vehicles which brought up the rear, were the features of the procession.

The judges unanimously decided that the Oldsmobile entered by General Cutting was the handsomest in the way of decorations, and there was no possibility of disagreement. The effect was superb. The car was covered with California pampas grass, and assumed the form of a barge floating down the Nile with a good looking Cleopatra dancing attendance on not such a good looking Marc Anthony. Second prize went to Benjamin Briscoe's Maxwell, which was profusely decorated with lilacs, roses and lilies, and a plentitude of grass, to typify "Spring." Another Oldsmobile received commendation from the judges. It was festooned with red and white electric lights and carried four young women dressed to represent the nations of America, France, Germany and Italy, as leading in the production of motor cars. One car simply studded with vari-colored incandescent lights along the body line excited comment. It is only the to say, however, that New Yorkers did not respond with

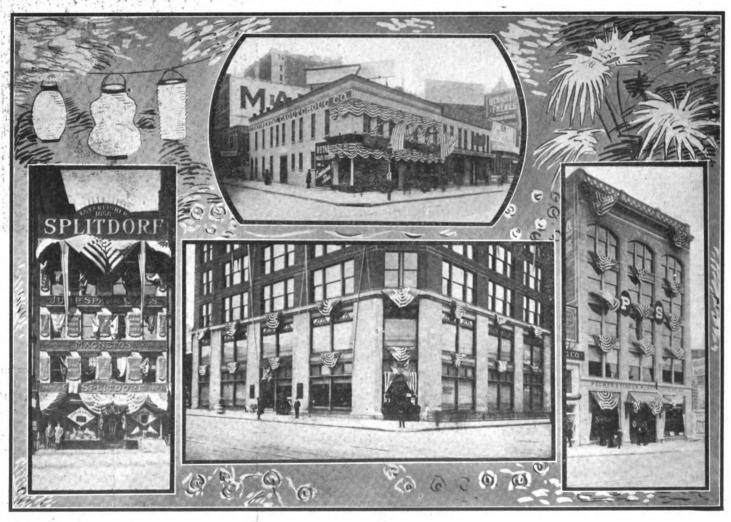
decorations as, pretty as have been seen in some other cities where decorated parades were held. Many of the cars could have been made attractive with only Japanese lanterns but it was a noticeable fact that, with one or two exceptions, not one Japanese lantern was in evidence.

There were several grotesque cars which, coming late, as did the commercial division, were not appreciated as fully as they deserved, for the reason that most of the

while behind trotted a dilapidated horse, the only one in the parade. A large canvas sign bore the inscription, "The passing of the horse." Dr. Julian P. Thomas, the aeronaut, had a wind wagon, while J. E. Fischer's car was uniquely decorated with college flags. One of the most conspicuous grotesque effects was the White Rats' presidential car, which carried five examples of presidential timber. C. J. Stine, who drove the car, made up Secretary Taft,

Wallace, Knox, and E. C. Buchigani, Olds-mobile

There were considerably more than one hundred vehicles in the commercial division. The biggest individual showing was made by the New York Transportation Co., whose superintendent had been elected king of the carnival by a popular voting contest conducted by a metropolitan newspaper. This company had a score of taxicabs, hansoms, landaulets, broughams, vic-



CONTINENTAL, SPLITDORF, STUDEBAKER AND PALMER & SINGER IN CARNIVAL TRAPPINGS

crowd had left Broadway, the upper part of it, at any rate, by the time the divisions reached there. The most grotesque car was that entered by the De Witt Motor Co., and it carried off the prize in this class. The car was rigged as a burlesque "around the world racer," a sign on the rear apprising the crowd that the car left Paris April 7, 1906, and had arrived in New York April 7, 1908, which was Tuesday night. The car looked as if it had been through a siege. A big cooking stove was placed on the hood, while several clothlines held all the equipment of a circummundane racer. A goat, "captured on the back steppes of Siberia," comprised part of the equipment.

A bit of pathos centered around the float designed to represent the passing of the horse. This showed a car pulling a truck

while the other occupants were disguised as President Roosevelt, "Uncle Joe" Cannon, William J. Bryan, and Governor Hughes.

Among the other decorated cars in the line were those of C. R. Teaboldt, Garford, bedecked with flags; George Goltzer's festooned Ford; E. Detmeld's chrysanthemum covered. Oldsmobile; James Unger's Ford, and Edwin Blumenthal's Olds, both covered with flags. C. V. Palmer's car, covered with bunting and acetylene lights presented a striking display. H. T. Pond's Rambler was decorated with lemons and G. E. Knabe's Lozier was a pretty picture with its floral display. Some of the drivers who employed flags and bunting for decorations were Bronson Howard, Oldsmobile; Dr. W. H. Navis, Mitchell; G. H.

torias, park wagons and sight seeing cars decorated in green and gold. The 50,000 candle power searchlight mounted aloft on one of the vehicles lighted Broadway for more than a mile, while a specially designed confetti gun, worked by compressed air, caused the street cleaning department to mutter uncomplimentary things the following morning. Another feature of the transportation company's display was an oxyhydrogen automobile cannon, which made the night hideous with the reports from its twelve barrels. In this gun a mixture of oxygen and hydrogen gases was exploded by an electric spark, in twelve tubes of various sizes. The operator did not get tired of working it, either.

One interesting float was that of the Ficklin body building concern, which com-

prised a big truck with men working at a forge and anvil making irons for a cape top. Milton Lusk, with his Gabriel horn pipe organ, also was in evidence. The most scintillating float of all, however, was the immense creation depicting Goodrich tires, which fairly dazzled with electric lights. A huge automobile wheel and tire in incandescent lights surmounted the creation. Practically every make of commercial vehicle was represented in this division, while all the metropolitan newspapers, and a number of department stores, express compaies and other business concerns showed up in numbers.

With flags and bunting, with a mass of color in which the red, white and blue is blended with the flags of the various countries, Broadway, especially that part of it that has become known as "automobile

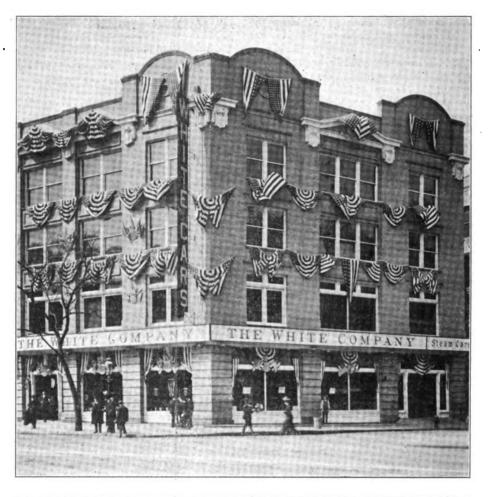


GARFORD BRANCH IN GALA DRESS

row." is attired in gala dress in honor of the Automobile Carnival in celebration of the tenth anniversary of the introduction of the automobile in the city of New York.

Almost without exception the buildings, that in whole or in part figure in the automobile industry, have been decked out with color, and many are the forms and designs which have been employed in the decoration scheme. Flags are fluttering everywhere, and are interwoven with streamers and bunting. Broadway from Forty-second street to Eightieth street is a mass of color, while side streets and adjacent thoroughfares add their mite to the whole until that part of the city suggests that some event of national importance is about to occur, or even now is going on.

As one turns into Broadway from Fortysecond street, after passing some gaily decorated "lobster palaces" the eye encounters the Garford headquarters, festooned with flags and streamers from roof to sidewalk; further along "the line" the im-





WHITE, CORBIN AND AMERICAN LOCOMOTIVE DECORATIONS

mense Studebaker building displays the national colors in profusion, simply but most effectively. Then there is the Goodrich branch with an electric arch and the Palmer & Singer building, with flags, festoons and shields.

The west side of Broadway from Fifty-first street to Fifty-second street, presents an unbroken line of decoration. Splitdorf's downtown headquarters is almost hidden from view by the decorative scheme which covers the front of the building with the flags of all nations. The home of the Fords is also decorated from street to housetop, as is the building of Wyckoff, Church & Partridge, where the Stearns is housed, on the corner of Fifty-sixth street, and also the Rainier building just west of it on the side street.

From Fifty-fourth to Fifty-sixth streets on the west side of "the row" the decoration is broken only by the intersecting street, and so it is all along the way. At Sixty-second street the White Co. on the corner, and the Rambler and a taxicab company adjacent to them on the side street, have united in a uniformity of decoration that is most attractive, while the Panhard and C. G. V. express their approval by flags and streamers, to which the American Locomotive Works has added a large electric Berliet hub cap. Yet these are not all, nor nearly all, for festival colors mark the places of the Oldsmobile and Northern; the Cleveland, Smith-Haven Co., and the Hercules Leather Tire Co.: the St. Louis Car Co., who sell the American Mors, the Rainier, and R. M. Owen & Co. The windows of the Hartford Rubber Works are full of flags, the Autocar place is decorated, the Fiat has the American and Italian flags, while the Maxwell-Briscoe Co., on Fifty-ninth, street, are strictly American. The Renault, Ajax-Grieb Tire Co., and the Continental Caoutchouc Co. all have elaborate dresses, and to mention each would be but a repetition of the trade directory. For about two miles Broadway is brilliant and enthusiastically decorated. It presents a panorama of color that fittingly welcomed the parade, which was the opening feature of "Carnival Week."

This afternoon (Thursday) the hill climbing contest, to be held on the short but steep incline known as Fort George hill, in the north end of the city, doubtless will attract thousands to that feature of the carnival. Standing starts will rule, which will eliminate the grave possibilities attendant upon wriggling through the elevated structure pilars at the bottom of the hill. If all the cars entered take part it will be the biggest hill climbing contest ever held in America. When the entries closed last night there were 84 entries in the 11 events.

In the Free-for-all the entrants are: Pennsylvania, Renault, Apperson, Matheson, Pope-Hartford, Stevens-Duryea, Fiat, Stoddard-Dayton, two Knoxes and three Whites.

PUZZLES IN JOBBERS' PRICE LISTS

Curious Comparisons Afforded by Some New Catalogs—Standard Supplies Quoted at Varying Figures.

He is a wise man who knows his own father. But wiser by far must be the manufacturer of automobile accessories who is able to tell what his list price will be made to appear even after he sets the figure.

When the owner of an automobile makes application for this registration number and license to the proper authorities of the State in which he lives, his name and address is sent throughout the country to those who are sufficiently interested in the matter to purchase the information. As a result of having his name sent broadcast the man to whom the registration is granted at once becomes the recipient of all sorts of literature pertaining to automobiles and the accessories thereof. Prominent in the mail received from this source will be catalogs from the jobbers and dealers, and so-called discount houses, and when all are carefully conned, perplexity and doubt ensues until finally the new votary to the sport of automobiling is dazed by the mass of conflicting statements in regard to prices, which ofttimes bring the conclusion that the automobile industry is a game, rather than a business founded on and conducted with, business principles.

As the season of 1908 opens the jobbers' catalogs are obtaining wide circulation. Seven of these catalogs, received from jobbers and "discount houses," whose headquarters are in different cities throughout the United States, were compared in relation to their respective prices on standard goods of well known manufacturers. The result of the comparison shows such a wide variation in the prices of articles which by every rule of established business methods should be sold for the same price, that it is impossible to determine by what system of mathematical computation the list prices were arrived at. In the appended table 15 well known articles are named together with the "list" prices of the different jobbers. In arranging this table it was necessary to select articles which, for the purpose of comparison, should be the

same and made by the one manufacturer. This has been done, and the various prices that are quoted refer to the same thing, an article unchanged in style, workmanship and date.

One of the peculiar features brought our in the examination of the catalogs was the fact of the same article, a hammer, being listed on one page at \$1.30, and on another page of the same book the list was \$1.00. How these two prices can be reconciled it is hard to say, yet after looking at all the catalogs, one is not surprised at any figures which may be printed.

Cut Rate Tires for Club Members.

The Automobile Club of Maryland has gone into the tire business. That is, it is buying tires in large quantities direct from the manufacturers and is selling to ats members at practically wholesale prices, according to advices from the Monumental City.

Local dealers, many of whom were prime movers in the organization of the club, are not in sympathy with these plans, naturally, which will mean a cut in their tire trade. The club has more than 200 members and if every one purchases tires through the club the loss to the dealers will amount to considerable in the course of a year. It is said that before placing an order for \$500 worth of tires with a New York concern the club approached the local dealers and asked them to give members a special rate on tires. The dealers discussed the request at a meeting held a week ago and while they would not give out the result, it evidently was not satisfactory to the club, as an order was immediately sent to New York City. President Reese did not deny the purchase.

"We could not come to terms with the local dealers," he is accredited with saying," so members of the club subscribed \$500 to buy tires in New York. This is as an experiment, which, if successful, will be continued."

It is quite as important to keep the vibrator of a high tension magneto in order as it is to attend to the wants of the same device when attached to an ordinary coil. Because the part is well hidden from view ordinarily, however, the tendency is for it to be overlooked except when its cry for adjustment becomes absolutely imperative.

	Α	В	С	D	E	F	G
Switch	\$1.00	\$1.30	\$1.50		\$.90	\$1.50	\$1.30
Spark coil	42.00	60.00	50.00	60.00	48.00	50.00	62.50
Carburetter	13.50	16.00	16.00	16.00		18.00	18.75
Speedometer	75.00	75.00				75.00	150 00
Secondary cable (ft.)	.25	.30	.25	.18	.25	.25	.25
Battery connection (doz.)	.60	1.00	.90	.50	.90		1.20
Spark plug	1.70	2.50	2.50	2.50	2.00	2.00	2.50
Spark plug	1.50	2.50	2.00	1.25	2.00	2.00	1.80
Tire tool	6.00	9.60	9.00	6.00	6.00	8.00	
Wrenches	12.00	16.80	12.00	7.75	12.00	12.00	
Vulcanizer	20.00	40.00		17.50	20.00	20.00	
Tire pump	4.00	4.50	5.00	3.50	3.75	4.75	
Tire pump	5.25	8.00	6,00	5.00		6.00	7.60
Pump connection	.25		.35		.30	.50	
Gas bags	.30	.40	.40	• • • •	.25	.35	.32

VANDERBILT FAVORS THE FREAKS

Revised Rule for the Cup Race Encourages
Their Construction—Four Courses
Likely to be Available.

William K. Vanderbilt, Jr., has made plain that he cares little how abnormal may be the cars that compete for the massive silver cup which bears his name. It had been thought possible that he would consent to make the limit one of reasonable piston displacement instead of weight, but this supposition was routed at a meeting of the racing board of the American Automobile Association, held on April 2d, at which the doner of the trophy was not present, though he was in touch with the chairman by telephone. As a direct result of his wishes the rules governing the Vanderbilt cup race not alone permit, but encourage the construction of freak racers.

The rules governing the race were considered, but were left unchanged, save that the number of cars which may be entered by any competing country has been raised from 5 to 10. But by far the most important change was that which relates to the weight limit. The revised rule requires a minimum weight of 900 kilograms (1,983.6 pounds), and a maximum weight of 1,200 kilogram (2,644.8 pounds). In the former races for the Vanderbilt cup the maximum weight allowed was 2,204 pounds, but as this limitation would render ineligible many of the foreign cars now being built for the big races abroad, it was Vanderbilt's personal desire that the maximum limit be increased in order that these cars might compete in his race.

Though the date and place of the race will not be announced until after July 1st formal applications have been received fram Savannah, Ga., and St. Louis, Mo., and in addition to the possibility of the Long Island Parkway, it is said that another course in the vicinity of Bridgeport, Conn., is receiving consideration.

While no entries have been received, assurances have been given that two Locomobiles, two Thomas Fliers, two Appersons, two Isotta-Fraschini, one Darracq and a Renault will compete. The entry fee will remain at \$1,000 until Sept. 1; after that date it will be doubled.

Winged Foot Adopts Automobiles.

The New York Athletic Club, prob bly the wealthiest and largest club of its kind in America, has "gone in for" automobiling. Announcement to the effect that the big club will create an automobile section was made last week, when the project was formally launched at a dinner given in the city club house at which about seventy-five members of the club were present.

From the fact that 480 cars are owned by the automobilists that are included

among the 5,200 members of the club, it would seem a wonder that the New York Athletic Club had not long ago created an automobiling department. The additional fact that many of its automobilists are members of the Automobile Club of America, which at present is not having plain sailing, tend to make the announcement of more than usual interest at this time.

Walter Wilson, president of the Mercantile Trust Co., presided at the dinner at which the project was launched and at the speakers' table were Robert Lee Morrell, President George W. Kuhlke, W. L. Mitchell. Judge Warren W. Foster and George B. Hulme. Mr. Mitchell offered a resolution that the formal organization of an automobile section be proceeded with, and this was carried by a unanimous vote. Details of the organization work were left to be settled by the automobile committee and will be largely in the hands of E. B. Gallaher, who has been chiefly responsible for the creation of an automobile section. His associates are Herman Liebert and Thomas E. Deeley, who have had charge of the automobile affairs of the club for a long time.

The new club, or more properly, the new section, will officially be titled the Automobile Section of the New York Athletic Club, and as more than 200 members already have promised to join the new section, it is stated it doubtless will start with a flourish. Arrangements already have been made to secure automobile insurance for members of the automobile section at a reduction of 20 per cent. from regular rates, and it also was announced that arrangements will be made to secure supplies and accessories for members at somewhat reduced rates.

No Postponement of Briarcliff Race.

Because of talk of postponement that had arisen, at a meeting of the entrants and promoters for the Briarcliff trophy stock car race, which was held on Thursday last, April 2d, it was definitely decided that the race would occur on Friday, April 24th, as originally scheduled, the promoters leaving the decision to the entrants. The permit for the race, issued by the Westchester authorities, stipulates that the contest shall last not more than 10 hours, and as several of the entrants have expressed opinions that the condition of the course will not permit of an average speed greater than 35 miles an hour, it is probable that the distance of the race will be not more than 300 miles. It was the indifferent condition of several sections of the course that provoked the talk of postponement.

The authority to make the final decision as to the distance of the race and the time of starting is vested in the racing board of the contest which consists of Robert Lee Morrell, chairman, S. B. Stevens, Alfred Reeves, E. T. Birdsall, and C. R. Mabley. Two late additional entries have been accepted, thereby bringing the total to 22.

NEW CUP FOR STOCK CAR RACE

Chairman Thompson Proffers Trophy for International Contest—The Idea Regarded with Favor.

That there should be but one race for stock chassis held in America each year, but that it should be international in character, was the opinion expressed by representatives of the National Association of Automobile Manufacturers, the American Motor Car Manufacturers' Association, the American Automobile Association comprising the Central Conference Committee. which met in New York City Tuesday morning last, 7th inst. Coincident with this expression of opinion Jefferson De Mont Thompson, chairman of the racing board of the American Automobile Association announced that if the manufacturers will support such an international stock car contest, he will give to the American Automobile Association, as the governing body, a cup valued at \$3,000, which shall be competed for annually in one great stock car event. The trophy would be known as the Jefferson De Mont Thompson Cup, and would be similar to the Vanderbilt and the Glidden trophies. Chairman Thompson's offer was enthusiastically received and the representatives of the trade associations stated that they would bring the matter before their respective bodies at the earliest opportunity.

The representatives present at the meeting were President William H. Hotchkiss, Jefferson De Mont Thompson, Robert L. Hooper, Frank B. Hower, Fred H. Elliott. Louis R. Spears and Oliver A. Quayle, representing the American Automobile Association; S. D. Waldron and Windsor T. White, for the National Association of Automobile Manufacturers; Alfred Reeves, R. M. Owen and Harry Fosdick. of the American Motor Car Manufacturers' Association.

F. B. Hower, chairman of the touring board of the governing body, who intends to conduct a tour from Buffalo to Saratoga, N. Y., in July, outlined his plans for the run. He received several suggestions which, it is stated, will be incorporated in the rules which Chairman Hower made public this week. The proposed convention of the American Automobile Association, to be held in Buffalo, preceding the start of the tour, came in for some discussion, and it was the opinion that good roads should be the keynote of the convention.

The Automobile Club of Bridgeport, Conn., has elected these officers for the ensuing term: President, Frank T. Staples; vice-president, T. A. Strong; secretary, Frank W. Bolande; treasurer, L. B. Powe; governors, Silas Burton, Ralph M. Sperry, and A. K. L. Watson.

CMYKHANA ENDS CHICAGO CARNIVAL

Interest in the Events Leads to Repetition of the Meet—Skilful Contests but no Perfect Final Scores.

Despite weather that was cold and cheerless and that nearly caused a postponement the gmykhana arranged by the Chicago Automobile Trade Association as the feature of its "spring carnival week," attracted several thousand people to that part of Michigan avenue known as the "row" on Wednesday night last, 1st inst. There were five events but the feature of the novelty meet was the teeter board contest, in which the drivers were called upon to balance their cars upon a teeter board 20 feet long and 6 feet wide resting on an 18-inch fulcrum. Nine cars managed to score perfect counts in this event. Of almost as much interest was the spearing contest, in which the drivers were required to spear potatoes suspended from a string, while steering the car with the other hand. A miss and consequent bump in the face from the potato caused considerable amusement to the spectators.

The obstacle race caught 16 of the 24 cars competing, there being penalties for touching the blocks of wood that lined the short course, and which left only a clearance of four inches, which therefore required careful driving. In the average race, the object was to go a four miles an hour pace. No one "hit" it to the dot but two cars, the Pierce Arrow and the Mitchell, came very close, escaping with only one point penalty. In the apple race, in which the driver was compelled to pick an apple out of one bucket and deposit it in the next, repeating several times, only two cars were given perfect scores. They were the Franklin and the Holsman.

Following the completion of the events the technical committee of the association went into executive session and evolved Lanahan's Ford a winner with seven points against it, the award being made for the least number of points in the combined events. The scores of the other cars were: Mitchell, 28 points; Pierce-Arrow, 31; Rambler, 32; Stoddard-Dayton, 35; Franklin, 35; Woods, 37; Diamond T, 40; Overland, 44; Holsman, 64; White, 55; Autocar, 63; Knox. 64; National 65; Welch, 66; C-F, 67; Baker electric, 70; Royal, 73; Pierce-Racine, 76; Thomas-Detroit, 80; Lambert, 83; Maxwell, 87; Queen, 87; Apperson. 94.

So successful was Wednesday night's gymkhana that the dealers decided to repeat the affair on Thursday night, and four more contestants than on the preceding night lined up for the fun. The events were the same and the winners evolved by the addition of penalties in all five events as on Wednesday night. It was demonstrated that practice makes perfect, for a majority

of the drivers made better scores than on the first night. The winner turned up in one of the new comers, an Elmore touring car driven by Harry Sultzpaugh, who had only one point against him, that lost in the spearing contest, when he failed to catch one of the potatoes on the point of his spear.

Eight of the cars beat the total count of the winning Ford runabout of Wednesday night, when Lanahan got off with seven points. Lanahan bettered his previous score by three points and tied for fourth place with the Mitchell and the Knox. The total scores of the cars were as follows: Elmore, 1; Overland, 2; Buick, 4; Ford, Mitchell and Knox, 5; Oldsmobile and Moline, 6; Stoddard-Dayton and Rambler, 7; Diamond T, 9; Pennsylvania, 12; Pierce-Arrow, 25; Franklin, 27; C-F, 30; Autocar, 33; Stearns, 33; White and Lambert, 35; Welch, 37; National and Woods electric, 39; Queen and Corbin, 57; Pierce-Racine, 78; Thomas Forty, 88; Cleveland, 89; Simplex limousine, 105.

Three Clubs Choose Their Officers.

At its annual meeting last week the Rochester (N. Y.) Automobile Club elected the following officers: President, H. G. Strong; secretary, Bert S. Van Tuyle; treasurer, Rudolph Schmidt; governors. James E. Gleason, W. W. Hibbard, John E. Morey, F. A. Mason, Richard T. Ford, George F. Gordon, John S. Bingeman, A. F. Crittenden and Harry S. Woodworth. The secretary's report showed that the club has gained 113 members since the last annual meeting. Last year 22 members availed themselves of the privilege extended by the customs authorities of the Dominion of Canada to bond their cars into and out of Canada by paying a fee of \$5 to the secretary and it was announced that that arrangement will be continued this year.

Formal organization of the Spokane (Wash.) Motor Club was effected last week by the election of the following officers: President, H. Louis Schermerhorn; vice-president, O. B. Sellers; secretary-treasurer, Lawrence Jack; directors, the officers, H. L. Lilienthal and John Sengfelder.

Augusta (Ga.) automobilists have effected a reorganization of the Augusta Automobile Club. The new officers are: President, V. B. Garrett; first vice-president, F. B. Pope; second vice-president, J. H. Davidson; secretary, Dr. Eugene Murphy; treasurer, C. D. Carr.

Norristown Plans New Club House.

The Norristown (Pa.) Automobile Club evidently is in a flourishing condition. At the last meeting a committee was appointed to take charge of the erection of a new club house on De Kalb street, to cost \$10.000. The club has more than 200 members, a number having been enrolled at the last meeting.

GERMAN RETURNS TO REPAIR SHOP

Much-Repaired "Racer" Breaks Down Once More—French and Italian Entrants Finally Reach San Francisco.

Fate has been very unkind to the German entry in the New York to Paris struggle. Unless it be found feasible to transport the Union Pacific railroad shops to Alaska, it looks as though the Protos car will have to become a fixture in Utah. At last accounts, it was once more being repaired at the busy Ogden shops of that resourceful corporation. The other three contenders in the globe-girdling stunt are at present stationary in so far as their own efforts are concerned. The Thomas, carrying America's laurels, is supposed to have arrived at Valdez, Alaska, but the wires are down, and information is lacking. The Italian and French representatives are in San Francisco-waiting for the ships that sail into the frigid north, and upon which they will continue their race.

Last Thursday the French party, in charge of the De Dion car, encountered a sand storm and a few other difficulties in the heart of Death Valley. A delay of 22 hours was involved, and the incident brought about the first death which has been recorded to the credit of the undertaking. The driver of a rescue team sent out to aid the crew of the stilled car, in some way fell from his seat, breaking his neck. On the return of his team to the starting point, a second was sent out, which overtook the car a little beyond Stovepipe. Progress from that point to San Francisco was unbroken except for a comparatively. minor delay somewhere beyond Tulare. The hopes of France and Italy were reduced to a common plane when the De Dion rolled into San Francisco Tuesday afternoon.

The Protos, minus its lieutenant-commander, who had gone to Salt Lake City for rest and to attend to some "business" of his own, reached Ogden in the regular routine of its travels, on Thursday, and turned up at Kelton, Friday night. Next morning it started out bravely, but soon suffered a broken differential. Sunday was spent in making repairs. Monday a second start was essayed with the same unhappy result as before. So the car was returned to Kelton, and the U. P. authorities appealed to to send out a special train over the otherwise disused track between Kelton and Ogden and pack it back to the fi miliar shops. Meantime, the gallant Koeppen has hied himself off to Seattle where are all the spare parts intended for Alaskan consumption. They are at present all bound 'round with a red tape of customs formalities and obtainable only with difficulty.

RULES FOR MR. HOWER'S CONTEST

Conditions Under Which the Next Glidden
Tour Will be Made—Subject to Change
at Hower's Discretion.

Long awaited, the rules for "the Fifth Annual Reliability Touring Contest of the American Automobile Association, including the contest for the Charles J. Glidden Trophy for touring cars, and the Frank B. Hower Trophy for runabouts," which will start at Buffalo on July 9th and end at Saratoga, N. Y., on or about July 24th, were issued this week. It is made plain that the tour is not "of the American Automobile Association," or even of the Touring Board of that association, but of and for the chairman of the touring board. It is first and foremost a Chairman Hower tour.

The rules make it unmistakably plain that Chairman Hower is both the "whole thing' and the "real thing." The touring board has been set back in the zeroic shade. For the touring board is Hower-Frank B. 11-o-w-e-r. The rules state that "the chairman of the touring board shall be manager of the tour, with full power to enforce the rules, render the decisions and do anything else that would be within the province of the touring board of the American Automobile Association." This is "going some," but it is a mere dog trot in the line of sweeping authority, for a succeeding rule says that "the chairman reserves the right to alter or amend, suspend or repeal these rules from time to time, up to and including the end of the tour and final award, as may in his judgment be deemed expedient," in other words, Hower is the rules; why, in the face of this astonishing provision, any rules were ever printed, is difficult of comprehension.

This isn't all that Chairman Hower is, by any means. He-not the Touring Board, but He, the Chairman-reserves the right to refuse any entry, and after specifying that each entrant must furnish at his own expense, one official observer for each car entered, the chairman makes it plain that those observers must be acceptable to him, and subject to his instructions. If the observer is incompetent or fails to attend to the duties specified by the Chairman, he may suspend that observer and appoint a substitute at the expense of the entrant. If the entrant or official observer fails to observe the rules, or any other rules made by the chairman, or even fails to show proper courtesy to the chairman, or perhaps to the other officials of the tour, he may be disqualified. Thus is it made plain that no one may be allowed to answer back if the everything doesn't go just right. Again, the chairman shall have the power to disqualify any car for traveling at any speed which he, the chairman, may consider excessive under the conditions existing at the time without reference to the rules. After being disqualified a car may continue on the tour as a "non-contestant," that is, if the chairman condescends to permit it.

Despite glowing press agent advance notices that the chairman answered every criticism and corrected every fault of former tours, there is nothing startling in the rules for the 1908 tour, excepting the fact that Chairman Hower is more than ever the whole thing, and that the touring board of the governing body has not even a say so in the chairman's tour. The entry fee has been fixed at \$200 instead of \$100 as formerly. The ridiculous practice of allowing contestants to come within a few yards of controls and remain, watches in hand, until the proper moment for crossing the line arrives, will be continued.

The Glidden trophy will be contested for by teams, as last year, divided into four classes, designated as follows:

Class A, Cars valued at \$3,500 and upwards; Class B, cars valued at \$2,500 and up to \$3,500; Class C, cars valued at \$1,500 up to \$2,500, and Class D, cars valued under \$1,500. When the daily running time shall exceed 7½ hours the running time of Class B will exceed that of Class A 15 minutes; Class C will exceed that of Class A 30 minutes, and Class D will exceed that of Class A 45 minutes. When the daily running time is less than 7½ hours, Class B will exceed that of Class A 10 minutes, and so on.

Penalties will be imposed for reaching controls ahead of, or behind running time, two minutes being allowed for variation of time pieces. The penalizations per minute or fraction thereof in excess of two minutes at controls will be worked out in proportion to the number of cars on each team. For instance the club team will start with an initial credit of 1,000 points, and the penalization per minute at controls for a three car team will be 1/3 point; for a four car team, 1/4 point and so on. In like manner are the penalizations per dollar or fraction thereof of value of parts per manufacturer's price list to be imposed. The cars must be equipped according to catalog specifications and all must carry mufflers and mudguards. Those competing for the Glidden Trophy shall be equipped with regular standard touring car bodies with seats for four or more passengers, of an average weight of 125 pounds each, or equivalent in ballast.

No replacements, replenishments, adjustments or repairs, shall be made upon any contesting car between the time it shall have been registered in at any night stop of the tour, and the time it shall register out the next morning. All replacements, etc., must be inventoried at the start and carried on the tour, and if replacements other than those are made the car may continue in the tour, but not as a contestant. Tires are excepted. Repairs must be made by the driver or mechanic, or by both. Should road conditions be so bad that a

car cannot get sufficient traction to move, or is ditched, after reasonable effort has been made to extricate it, towing or other external means may be used to relieve the immediate distress only.

Two classes are provided for in the tour for the Chairman Hower Trophy, which is for runabouts: Class A, for cars valued at \$1,500 and upwards, and Class B, for cars valued under \$1,500. The difference in running time between the classes shall be the same as in the classes for touring cars competing for the Glidden Trophy. The method of scoring is practically the same. As this is an individual contest each car will receive an initial credit of 1,000 points and a penalization of one point per minute either way in excess of two minutes leeway at controls will be imposed, and likewise a penalty of one point per dollar and fraction thereof of value of parts replaced.

Under the head of "Hotel Accommodations" it is stated that a certain company which has conducted tours will have charge of hotel accommodations. Although there was considerable grumbling last year about hotel accommodations and the exorbitant rates charged for ordinary rooms it never theless is stated that "as the reputation of this firm is well established the tourists need have no fear but that they will receive the best of service." For fear that some of the contestants who have been through other Glidden tours might take exception to this statement the chairman "particularly requests that no hotel reservations be made by individuals."

Date Set for Dead Horse Hill Climb.

No time has been lost by the Worcester Automobile Club in planning for a revival of the Dead Horse Hill climb, made possible by the new Massachusetts law authorizing the mayor and aldermen of cities and the selectmen of towns to temporarily close public roads for automobile contests. The board of governors of the club held a special meeting on Tuesday, 7th inst., and appointed a committee to confer with the selectmen of Leicester and the mayor and aldermen of Worcester regarding a permit for a hill climb on June 6. The course on which this particular "knob" is located lies partly in Worcester and partly in Leicester. Plans for the contest, so far as they were considered at this meeting, will bar all high powered special cars and freaks. Only stock cars will be permitted to compete.

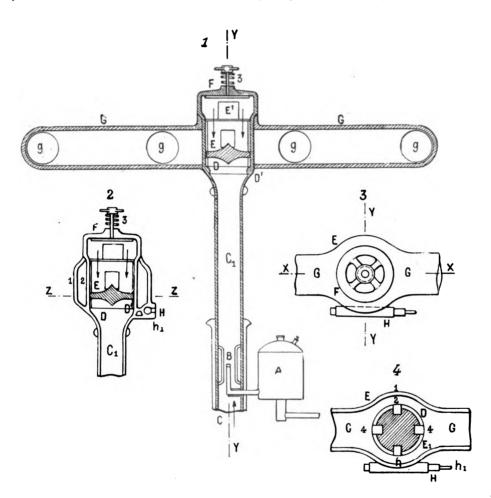
Besides a number of breakfast food factories and sanitariums, Battle Creek, Mich., now has an automobile club, organization having been effected last week with forty charter members. The club will join the American Automobile Association through the State association. The officers elected were: President, N. E. Hubbard; vice-president, V. E. Bush; secretary, F. J. Rathbun; treasurer, Frank Evans; directors, C. L. Post, D. H. Frazier, J. C. Grandon and G. W. Meachem.

NEW MIXING METHOD FROM FRANCE

Designed to Assure Constant Conditions at the Jet—How the Effect is Brought About in a Carburetter.

There are many good reasons for believing that the present method of vaporizing the fuel and mixing it with air at a point quite remote from the engine, may not be adhered to indefinitely, but that some other and more approved system may ultimately take its place. Of the several arrangements in present use which differ from the ordinary carburetter in this respect, that re-

With this arrangement the particles of fuel which are not vaporized, instead of being carried through to the cylinders are projected against a diaphragm which is placed across the head of the stand pipe. This diaphragm is in double conical form, and serves to deflect the rich fuel vapor with its entrained particles of liquid fuel into a horizontal plane, while it also deflects the stream of air of dilution, which is admitted from above similarly, thus affording ample opportunity for the ingredients to mingle before the cylinders are reached. The air is admitted through apertures in the sides of a rotating throttle sleeve which register with corresponding openings in the seating.



cently devised by the Société Delaunay-Belleville, presents several characteristics which are more or less admirable as well as novel.

In this system, the fuel vapor is created in a relatively small mixing chamber in somewhat the usual way except that a very rich mixture is formed—much too rich, in fact, for ordinary consumption. The dilution of this rich base, instead of being carried on in the mixing chamber proper, however, as is done commonly, takes place as the gas enters the distributing manifold. The effect of this is to establish conditions in the region of the jet which are much more nearly constant than are obtained ordinarily.

The accompanying illustration shows the general arrangement as well as several 'sections of the mixing and throttle valve, taken along the lines indicated. A, is the float chamber, B, is the simple jet, and C, the ports through which the basic supply of air is admitted. The mixing chamber proper is at C', while D is the diaphragm which serves to mix the ingredients of the gas. As shown, it is roughly of bi-conic section, and is mounted co-axially with the cylinder D', with which it is made integral. The casing, E, in which the diaphragm is mounted, is furnished with a chimney, or draught tube, E', which has ports, 1-1, registering with the ports, 2-2, in the cylinder D, by means of which the supply of gas is regulated, through the action of the controller, F. This valve, which controls the admission of cold air to the mixture. is seated normally by means of the spring, 3, but opens in proportion to the suction created in the intake pipes leading to the cylinders of the motor. The flow to the right and left is established through the channels 4-4, formed between the casing, E, and the chimney E'. Independent connections enter the manifold, at g-g, leading to the inlet ports of the cylinders, H.

The controlling mechanism consists of the cam, H, which is screwed to the base of the cylinder, D', and has at its other extremity a link, attached to the rod, h'. which is regulated by means of a lever.

From the foregoing, it will appear that the system in question is, in a way, a sort of compromise between the ordinary methods of carburation in present vogue, and the principle of the mixing valve, which has never become at all familiar in automobile practice as regards the four-cycle motor. By many engineers it is regarded as a practical impossibility to form a uniform quality of gas except where a considerable length of induction pipe is employed. By others, this feature is regarded as more or less a necessary evil, incidental to the requirement of serving all of the cylinders with a uniform quality of gas. Current practice appears to show a leaning toward the shorter induction pipe, and it will be interesting to observe whether the idea here expressed affords any new light on the question.

Three Wheel Mounting and Traction.

Three-wheel mounting, and three-wheel traction, constitute the chief features of novelty in the British, Saunderson agricultural motor, which is an all-around utility vehicle, designed especially for farm work. The two front wheels of the vehicle are connected through a differential in the usual way, while the third is driven from what is essentially a continuation of the lay shaft of the transmission gear, and is in direct communication with the shell of the differential. As a result of this, neither of the front wheels is permitted to spin independently when on a smooth spot, so that a remarkably even degree of traction is claimed for the system. The affair, which is useful as a portable power plant for stationary as well as for tractive purposes, is driven by a 50 horsepower motor. The exhibit of this machine formed by all odds the most interesting feature of the thirteenth annual Cordingley show at Agricultural Hall, London, in so far as the commercial section was concerned, and for that matter of the entire exhibition. The section devoted to pleasure cars boasted some dozen or so of machines which had not been exhibited previously this season, one or two, in fact being new cars in the absolute sense, but not of a striking nature. The show was "unsanctioned," and appeared to labor under the stigma of the unlucky numeral.



REVISING THE NEW YORK LAW

Registration Fee to be Based on Weight of Car—Offenders to be "Posted" in Every County.

After nearly four years' service, the existing automobile law of New York State, which has operated satisfactorily and which is as fair to automobilists as is possible to expect, is in a fair way of being wiped off the books. On Friday last the measure prepared by the New York State Automobile Association formally was introduced into the senate by Senator Armstrong and into the House by Mr. Merritt. The bill closely follows the so-called uniform bill outlined by the American Automobile Association.

It sweeps out the present permanent registration fee of \$2 and in its place provides for annual registration based on the weight of the car, as follows: \$5 for machines weighing between 1,500 and 2,500 pounds, and \$5 additional for each 500 pounds in excess of 2,500. It is estimated that the revenue that will accrue for road improvement will amount to \$400,000. The exact language of the bill's reference to registration is as follows:

Sec. 2. Subdivision 1. Registration of motor vehicles.—Every owner of a motor vehicle which shall be operated or driven upon the public highways of this State shall, for each motor vehicle owned, except as herein otherwise expressly provided, cause to be filed, by mail or otherwise, in the office of the Secretary of State a verified application for registration on a blank to be furnished by the Secretary of State for that purpose, containing: (1) a brief description of the motor vehicle to be registered, including the name of the manufacturer, the factory number or mouel, if such number or model there be, the character of the motor power and the actual weight in pounds of the motor vehicle; (2) the name, residence and business address of the owner of such motor vehicle and the name of the county in which he resides; provided that if such motor vehicle is used or to be used solely for commercial purposes the applicant shall so certify and also state the business in connection with which such vehicle is so used or to be used.

Subd. 2. Registration book.—Upon the

Subd. 2. Registration book.—Upon the receipt of an application for registration of a motor vehicle or vehicles as provided in this section and in section four of this act, the Secretary of State shall file such application in his office and register such motor vehicle or vehicles with the name, residence and business address of the owner, manufacturer or dealer as the case may be, together with the facts stated in such application, in a book or index to be kept for the purpose, under the distinctive number assigned to such motor vehicle by the Secretary of State, which book or index shall be open to inspection during reasonable business hours.

Subd. 3. Certificate of registration.— Upon the filing of such application and the payment of the fee provided in subdivision six of this section, the Secretary of State shall assign to such motor vehicle a distinctive number and, without other fee, issue and deliver to the owner certificates of registration, in duplicate, in the form and size provided in subdivision three of section three hereof. In the event of the loss, mutilation or destruction of a certificate of registration, the owner of a registered motor vehicle may obtain from the Secretary of State an affidavit showing the fact and the payment of a fee or one dollar for each duplicate.

Subd. 4. Registration lists to be furnished county clerks.—The Secretary of State shall within sixty days after this act takes effect, and thereafter, on or before the first day of February of each year, furnish to the clerk of every county in the State a full and accurate list of all motor vehicles so registered, stating the distinctive numbers so assigned to them and the names, residences and business address of the owners, manufacturers or dealers, as the case may be, and once each month thereafter a similar list of the additional registrations, which additional list shall be entered by each county clerk upon the original list received by him. Such lists shall be filed by such county clerks and be kept as public records, open to inspection during reasonable business hours.

ing reasonable business hours.
Subd. 5. Re-registration annually.—Such registration shall be renewed annually in the same manner, and upon the payment of the same fee as provided in this section for original registration, such renewal to take effect on the first day of January of each year.

Subd. 6. Registration fees.—The following fees shall be paid to the Secretary of State upon the registration or re-registration of a motor vehicle in accordance with the provisions of this act; five dollars upon the registration of a motor vehicle having a weight of fifteen hundred pounds or less; ten dollars upon the registration of a motor vehicle having a weight of more than fifteen hundred pounds and not over twenty-five hundred pounds; and for every five hundred pounds, five dollars additional; provided that the owner of any motor vehicle which has been registered under existing law subsequent to the thirty-first day of December, one thousand nine hundred and seven, shall be entitled to a credit or rebate of the fees paid under such law for such registration; and provided further that for motor vehicles which in the verified application for registration are stated to be used solely for commercial purposes there shall be paid but one-half the foregoing fees and in no event more than ten dollars.

Subd. 7. Fees in lieu of taxes.—The registration fees imposed by this act upon motor vehicles, other than those of manufacturers and dealers and those used solely for commercial purposes, shall be in lieu of all other taxes, general or local, to which motor vehicles may be subject as personal property under the laws of this State.

Subd. 8. Sale and registration by vendee.

—Upon the sale of a motor vehicle registered in accordance with this section, the vendee shall, within ten days after the date of such sale, notify the Secretary of State of the same upon a blank furnished by him for that purpose, stating the name and business address of the previous owner, if known, the number under which such motor vehicle is registered and the name, residence and business address of such vendee. Upon filing such statement such vendee shall pay to the Secretary of State a fee of one dollar, and upon receipt of such statement and fee the Secretary of State shall file such statement in his office and note upon the registration book or index such change in ownership, and at least monthly notify every county clerk of the State of such

sales, each of whom shall immediately note the same on the list of registered vehicles received and kept on file by him as herein provided.

Section 4. Subd. 1. Registration by manufacturers and dealers.—Every person, firm, association or corporation manufacturing or dealing in motor vehicles may, instead of registering each motor vehicle so man-ufactured or dealt in, make a verified appli-cation upon a blank to be furnished by the Secretary of State for a general distinctive number for all the motor vehicles owned or controlled by such manufacturer or dealer, such application to contain: (1) a brief description of each style or type or motor vehicle manufactured or dealt in by such manufacturer or dealer, including the character of the motor power, the amount of such motor power stated in figures of horsepower, and the weight in pounds of each such style or type; and (2) the name, residence and business address of such manufacturer or dealer. On payment of a registration fee of fifteen dollars such application shall be filed and registered in the office of the Secretary of State in the manner provided in section two of this act. There shall thereupon be assigned and issued to such manufacturer or dealer a general distinctive number and duplicate certificates of registration in the manner provided by section two, which shall be in the form of plates as provided in section three, duplicates of which shall be carried or dis-played by every motor vehicle of such manufacturer or dealer so registered when the same is driven or operated on the public highways. Such manufacturer dealer or may obtain as many duplicates of such certificates of registration as may be desired upon payment to the Secretary of State of one dollar for each such duplcate.
Subd. 2. Registration to be co

Subd. 2. Registration to be continuing.—The registration of motor vehicles registered under this section shall not be renewed annually in the manner provided in section two of this act, but shall be a continuing registration; and the distinctive number assigned to the motor vehicle of any manufacturer or dealer shall be retained from year to year without further registration or fee except for the issuance of duplicate certificates as hereinbefore pro-

Sec. 8. Subd. 1. Registration of chauffeurs.—Every person hereafter desiring to operate a motor vehicle as a chauffeur shall file in the office of the Secretary of State. upon the payment of a registration for of five dollars, a verified application for registration on a blank to be furnished by the Secretary of State for that purpose containing. (1) the name and residence address of the applicant and that he is competent to operate a motor vehicle; (2) the trade name and motor power of the motor vehicle or vehicles he is competent to operate; (3) whether or not the applicant has been previously convicted of a violation of any of the provisions of this or any other motor vehicle law or ordinance, giving the date and place of such conviction and the provision or provisions of the law or ordinance violated.

Subd. 2. Chauffeurs' registration book; lists to be furnished county clerks.—Upon the receipt of such an application, the Secretary of State shall thereupon file the same in his office, assign the applicant a number and register him in a book or index which shall be kept in the same manner as the book or index for the registration of motor vehicles. The Secretary of State shall also furnish to the clerk of every county of the State within sixty days after this act takes effect and once each month thereafter, a full and accurate list of chauffeurs so registered, with their addresses

and the numbers assigned to each, in the same manner as provided in section two with reference to registered motor vehicles. Such lists shall be filed by such county clerks and be kept as public records, open to inspection during reasonable business hours.

Subd. 3. Chauffeur's badge.—The Secretary of State shall forthwith upon registering such chauffeur, and without other fee, issue and deliver to him a badge of aluminum or other suitable metal, which shall be oval in form with its greater diameter not more than two inches, upon which shall be stamped the words "Registered Chauffeur Number : State of New York" with the number inserted therein. This badge shall thereafter be worn by such chauffeur, pinned upon his clothing in a conspicuous place at all times while he is operating a motor vehicle upon the public highways of this State.

Subd. 4. Fictitious badge.—No chauffeur, having registered as hereinbefore provided, shall voluntarily permit any other person to wear his badge; nor shall any person, while operating a motor vehicle upon the public highways of this State, wear a chaufeur's badge belonging to another person of a fictitious chauffeur's badge.

Subd. 5. Unregistered chauffeurs cannot

Subd. 5. Unregistered chauffeurs cannot drive motor vehicles.—No person shall operate or drive a motor vehicle as a chauffeur, upon the public highways of this State after thirty days after this act takes effect, unless such person shall have complied in all respects with the requirements of this section, provided, however, that a non-resident chauffeur, who has registered under the provisions of the law of the State of his residence which are substantially similar to the provisions of this secton, shall be exempt from registration under this section; and provided further he shall wear the badge assigned to him in the State of his residence in the inanner provided in subdivison three of this section.

The bill also requires new numbers annually, the number of plates to be of different colors each year, and that these numbers be displayed on both the front and the rear of the vehicle; that they be fixed rigidly to the vehicle, so as not to swing, that the rear number be illuminated at night, and prohibits the display of any number other than that issued by New York.

The bill wipes out all specific speed limits, but for reckless driving it imposes a fine not exceeding \$250 for a first offense, and a fine of not more than \$500 or six months' imprisonment, or both, for subsequent offenses. County clerks will be supplied with the names of all who are registered, which record must be kept open for public inspection. When an offender is adjudged guilty, the clerks of all counties will be informed thereof, of which due note must be made in their respective records. The clause providing for this remarkable "posting" of offenders is as follows:

Subd. 5. Certifying conviction to the Secretary of State.—Upon the conviction of any person for a violation of any of the provisions of this act, the magistrate or other judicial officer before whom the proceedings are held, shall immediately certify the facts of the case, including the name and address of the offender, the character of the punishment and the amount of any fine imposed and paid, to the Secretary of State, who shall enter the same either in the book or index of registered motor ve-

hicles or in the book or index of registered chauffeurs as the case may be, opposite the name of the person so convicted, and in the case of any other person, in a book or index of offenders to be kept for such purpose, in alphabetical order. The Secretary of State shall send notices of all convictions for violations of section seven of this act, with the names and addresses of the persons convicted, and the judgments of the court on such convictions, to the clerk of every county in the State, who shall enter the same on the lists of registered motor vehicles or registered chauf-feurs as the case may be, opposite the name of the person so convicted, or on a list of other offenders which he shall maintain in his office as a public record in the same manner as the lists of registered motor ve-hicles and registered chauffeurs, and on due application furnish copies of such lists to the magistrates or other judicial officers of his county before whom violations of the provisions of this act are triable. If any such conviction shall be reversed upon appeal therefrom, the person whose conthe Secretary of State a certified copy of the order of reversal, whereupon the Secretary of State shall enter the same in the proper book or index in connection with the record of such conviction, and shall also notify each county clerk of the same.

In event of arrest the bill provides that surety company bonds or the automobile itself shall be accepted as bail and also that all fines and surplus accumulated from the registration fees shall be applied to the improvement of the public roads. These provisions are thus outlined:

Subd. 6. Release from custody, bail, et cetera.—In case any person shall be taken into custody because of a violation of any of the provisions of this act, he shall forth-with be taken before the nearest magis-trate or justice of the peace in any city, village or county, or before any accessible captain, sergeant of police or acting captain or sergeant of police who shall have the powers of a magistrate or iustice of the peace and be entitled to an immediate hearing; and if such hearing cannot then be had, be released from custody on giving a bond or undertaking, executed by a fidelity or surety company authorized to do business in this State, such bond or undertaking to be in an amount not exceeding the maximum fine for the offense with which such person is charged and conditioned for his appearance to answer for such violation at such time and place as shall then be indi-cated, or on giving his personal undertaking to appear to answer for such violation at such time and place as shall then be indicated, secured by the deposit of a sum equal to the maximum fine for the offense with which he is charged, or in lieu thereof, in case of the person taken into custody is the owner, by leaving the motor vehicle, or in case such person taken into custody is not the owner, by leaving the motor vehi-cle with a written consent given at the time by the owner who must be present, with such judicial officer; or in case such judicial officer is not accessible be forthwith released from custody on giving his name and address to the person making the arrest and depositing with such arresting officer a sum equal to the maximum fine for the offense for which such arrest is made. or in lieu thereof, in case the person taken ir to custody is the owner, by leaving the motor vehicle, or in case such person taken into custody is not the owner, by leaving the motor vehicle with a written consent given at the time by the owner who must be present; provided that, in such case, the officer making the arrest shall give a receipt in writing for such sum or vehicle deposited and notify such person to appear before the most accessible magistrate, naming him, and specifying the place and the hour. In case such bond or undertaking shall not be given, or deposit made by an owner or other person taken into custody, the provisions of law in reference to bail, in cases of misdemeanor shall apply.

Sect. 11. Subd. 1. Surplus revenues to

Sect. 11. Subd. 1. Surplus revenues to be paid into State treasury.—The revenues derived from the registration fees provided herein shall be applied by the secretary of State in defraying the expenses incident to the carrying out and enforcement of the provisions of this act, and any surplus hereof shall be paid by the Secretary of State into the State treasury.

Subd. 2. Certain fines and penalties; to whom paid.—All fines, penalties or forfeitures imposed or collected for a violation of any of the provisions of this act, or of any act in relation to the use of the public highways by motor vehicles now in force or hereafter passed, which are imposed or collected under the sentence or judgment of a court of special sessions, held or presided over by a justice of the peace, shall be paid over by such justice of the peace within ten days after receipt thereof to the treasurer of the State, with a statement accompanying the same, setting forth the action or proceeding in which such moneys were collected, the name and residence of the defendant, the nature of the offense, and the fine, penalty or sentence imposed. On the first day of each month or within ten days thereafter, such justice of the peace shall make and forward to the treasurer of the State, a verified report of all criminal proceedings instituted or tried before him during the preceding calendar month for violations of any of the provisions of this act or of any act in relation to the use of the public highways by motor vehicles, which report shall set forth the name and address of the defendants, the nature of the offenses and the fines and penalties col-lected or imposed by such justice; which reports shall be public records and open to inspection during reasonable business hours

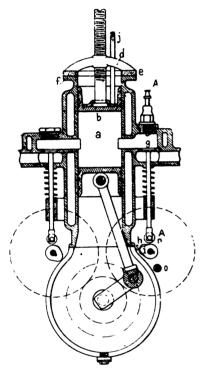
Subd. 3. Surplus revenues from registration fees and fines to be used for the maintenance of public highways.—All moneys coming into the State treasury pursuant to this act shall there be maintained as a separate fund for the maintenance and repair of the roads of this State and shall be apportioned as the State highway fund is apportioned.

The bill takes from local authorities all power to regulate the use of or to tax motor vehicles. The bill also provides that non-skidding devices may be used only when the highways are wet, slippery or covered with ice and snow, and contains the usual provisions exempting manufacturers and dealers from annual registration. There are also provisions requiring lamps, horns. brakes and the like, and provisions compelling motorists to stop on signal, and exempting non-residents of the State from registration providing they have registered their vehicles under similar laws in their own States and that they display their State numbers when operating such vehicles in this State. Among other "sops" for the automobilists is provision for a fine ci not more than \$500 for tampering with a

UNIFORM EFFICIENCY AT ALL TIMES

Varying Clearance and Charge to Effect Constant Compression—Novel Method Adopted in New Motor.

Methods of governing the internal combustion motor continue to multiply without end, a favorite method of attacking the problem, and perhaps the simplest which it is possible to imagine, being to vary the volume of the charge. Another is to vary the compression. One of the most recent developments along this line, which is embodied in the new Laval and Jallut motor,



SECTIONAL VIEW LAVAL AND JALLUT MOTOR

a French production, effects what is essentially a compromise of the two, without the drawbacks of either. It proposes the very novel expedient of firing the charge at constant pressure throughout the entire power range of the motor, and of varying the power output by varying the volume of charge exploded. To this end, the volume of gas inducted to the cylinder, and the compression are both altered proportionately in accordance with the power requirement of the motor at the instant.

The idea of employing variable compression for the purpose of governing the output of the motor is by no means uncommon. The difference between this and the more ordinary scheme is that as the compression is varied, the amount of gas taken into the cylinder also is varied so that as the volume of the compression chamber or clearance space is reduced, the charge taken in also is reduced, with the result that the compression pressure remains practically constant. The effect is practically that of using an infinite number of cylinders of

varying displacement, but with the same compression ratio, and so contrived that the strokes shall be equal. The particular advantages are that the ratio of burnt to unburnt gas-the co-efficient of dilution, in other words-remains practically constant, the mixture always is the same, the ignition always takes place under the same conditions, and is consequently perfectly dependable. The difference in power output is due to the expansion of varying volumes of charge, while the fact that when governed, expansion is carried out to a lower pressure than when running under full load, should tend to make the efficiency rise under light loads, instead of falling, as usually is the case.

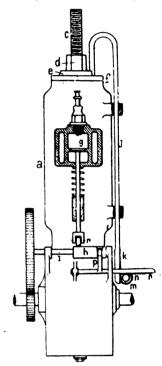
The manner in which this effect is secured is revealed by the accompanying illustrations which show a sectional view taken at right angles to the crank shaft, and another parallel to it, but showing only the inlet valve pocket in section, the remainder of the motor being shown from the exterior. It will be observed that the most striking difference between this arrangement and that of the ordinary motor consists in the employment of an upward extension of the cylinder which is fitted with a movable head in the form of a piston, both inlet and exhaust valves being placed in offset pockets, located at the upper end of the stroke of the working piston. The additional valve gear required to effect the variation in intake noted, comprises merely a cam of varying section and mechanism intended to displace it longitudinally to effect the desired changes.

Regarding the details more closely, it appears that the movable cylinder head, b, which is fitted with packing rings to form a gas-tight junction with the walls of the cylinder, a, is held in place by means of a screw stem or rod, c, which is threaded into a yoke, d, bolted to the flanges cast on the cylinder, at f, by means of the ring, e. By turning the rod by any suitable means, the position of the head in relation to the cylinder may be altered, thus adjusting the volume of the clearance or compression space accordingly. This movement may be effected automatically in motors of the stationary type. For automobile motors, it is intended to be controlled by hand.

To secure the co-relation of the gas distribution and the compression, the regulator rod, j, is employed, which is carried by the movable cylinder head, b, and is bent around over the top of the cylinder to lie along side it, where it extends down to the region of the valve gear. Its lower end at k, is suitably shaped and formed into a rack, which engages a pinion, n, on a short length of lay shaft, which also carries the second and smaller pinion, m, which, in turn, meshes with a second rack, o, sliding in guides parallel to the axis of the crank shaft, i, arranged so that any movement of the rod, i, is communicated in proper ratio of movement to the cam, h, which is slidably mounted on its shaft. This cam is of

varying section, as shown roughly at s, so that the time of opening is controlled directly by the position of the movable cylinder head. The length of time the inlet valve, g, is held open, of course, governs the amount of charge admitted to the cylinder, and the mechanism is so contrived that as the compression space is reduced in volume, the amount of gas inducted also is reduced in such proportion as to keep the compression and hence the explosion pressures, relatively constant.

Whatever objection may be raised against the system because of the added complication of the governing mechanism, not to mention the disadvantage of the movable cylinder head, with its tendency to leakage.



SIDE VIEW, SHOWING VALVE GEAR

heating, and other attendant difficulties, the fact remains that the idea upon which it is based is distinctly novel and appealing. A motor of this type would seem able to produce a wide variation of power output without any tendency to misfiring, and with a uniformity in efficiency which has been long sought, but never attained with the more common and simple methods of design.

Causes and Effects of Overheating.

Running with too rich a mixture, too late a spark or too much throttle opening all tend to cause the same difficulty—overheating. The result in either case, must be a slow explosion, which results in a high cylinder temperature throughout the whole of the working stroke, instead of only during the first part of it, and a high exhaust temperature and pressure. The result is that the lubricant is burned from the cylinder walls before it has time to perform its proper function; that the surface of the exhaust valve becomes pitted; and that the engine tends to overheat.

PROVINCIAL BAN ON AUTOMOBILES

Barred from Prince Edward Island by Legislative Action—Bermuda also Aims to Banish Its One Car.

Exclusion of the automobile has been decreed by the provincial parliament of Prince Edward Island. A resolution to that effect has been adopted by a non-partisan vote, and it is expected that the law necessary to carry this resolution into effect will be enacted before the legislature adjourns. Only nine automobiles are owned on the island, but the number is largely increased during the summer season when many Americans resort thither to enjoy the salubrious climate and the picturesque scenery, to say nothing of the hospitality of the people who are as warm hearted as they are intelligent and progressive. Their claim to progressiveness might be disputed in view of the anti-automobile action of their legislature, but the trouble appears to be with the horses, which see automobiles so infrequently that the vehicles are productive of equine terror. Horses are more extensively used than in any other of the prov-

Prince Edward Island was the last of the maritime provinces to enter into federation with the Dominion of Canada. It nominated and obtained very substantial benefits to be conferred at the cost of the Dominion in general before it would give up any part of its independence as a province. It is an island somewhat smaller than Long Island, N. Y., and about the same shape. with a population that would make but little appreciable difference in the rush over the Brooklyn Bridge. It has, however, all the standing and public machinery of a full fledged state of the American union. Before legislative action against the automobile was taken committee hearings were given and the question was discussed in all its bearings. It was pointed out that the country was thickly settled, and the railroad system, although passing through the principal towns, did not touch at many populous and busy country districts. As trade centers in a comparatively few towns and cities, it was necessary for hundreds of farmers to drive from place to place every week.

In the last few months public meetings have been held in different parts of the province for a discussion of the automobile question, and at these meetings reports have been presented. It was shown by these reports that church attendance at some seasons of the year had decreased because the country people were afraid to drive their families to church where there was a possibility of meeting an automobile on the road. Statements showing the frequency of accidents resulting from runaways where a horse has taken fright at

an automobile, and other inconveniences alleged to have been met by those who considered themselves sufferers from the operation of automobiles led to the action of the Provincial Parliament in declaring against such vehicles.

The few automobile owners have endeavored to meet the wishes of the people so far as possible without giving up altogether the pleasure and benefit derived from their motor cars, but all efforts to reach a compromise have failed. It was at first proposed that the operation of automobiles be prohibited on Tuesdays and Fridays, market days throughout the province, but this was not accepted, and the members of the parliament decided that the total prohibition of automobiles was the only satisfactory solution.

Doubt is expressed in some quarters as to whether the Provincial Parliament has the legal right to exclude automobiles, and it is expected that after the passage of the law the question will be carried to the highest court in the Dominion for settlement.

Bermuda is a much smaller island than Prince Edward Island, but it has, like that province, its own representative government, which also is likely to put up bars against the automobile. In this case, however, any attempt to overcome the action of the local legislature would center at the Colonial Office in London, instead of at Ottawa. Bermuda is not nearly so large as Staten Island, N. Y., and its population is less than 20,000. There is one automobile there, which is used as a stage for transferring passengers between Hamilton and St. George, about 14 miles. The roads are narrow and crooked, and so it happened that one of the islanders who met the automobile while riding a spirited horse was nearly killed by the actions of the animal. This aroused a popular feeling against the automobile which is likely to lead to legislative action enabling the government to buy the stage line and abolish it.

Politeness with an Unpleasant Result.

His gallantry led Spencer Wishart, a young student at Grenwich, Conn., to the police court one day recently. Young Wishart drove over to Stamford to call upon a young lady who, after showing him her "den" said:

"Oh, Spencer, I want an "auto' license plate for my den. Won't you get me one?" "Sure," said the gallant Lothario, at the same time removing the numbered plate from his car, "take this one."

The license plate was accorded a prominent place in the "den" and Wishart proceeded to Greenwich. Before he got out of Stamford, however, a conscientious citizen noticed the absence of a number on the car, and felt it his duty to inform the police. The Greenwich gallant had to leave his car as security for his appearance in court the next morning, and the trolley carried him back to the sound village.

ANOTHER MASSACHUSETTS SQUEEZE

Legislative Committee to Report Bill Increasing Taxation of Automobiles—
Opposition to be Vigorous.

Whatever additional revenue the Commonwealth of Massachusetts can squeeze out of automobilists is to be squeezed, it would appear. The source is regarded as a juicy one, and it was to be expected that when Governor Guild in his inaugural address showed how the squeezer might be applied the suggestion would be followed up by the Great and General Court. That portion of the Governor's address was referred to a joint special committee composed of the members of the committee on taxation and of the committee on roads and bridges. The special committee met in executive session on the 31st ult., and voted to report a bill to tax automobiles according to horse power, or in other words, along the lines suggested by Governor Guil.d.

Any such bill will meet with vigorous opposition, and plans are afoot for a meeting in Boston to enable every man in the State in any way identified with automobiling to co-operate and show to the legislature that in taxing the motor car doubly, as the bill proposes, the matter strikes at every man dependent upon the cass for employment.

What makes the motorists wroth is what they term the unfairness of the whole thing. One afternoon two days before the automobile show opened in Boston, and when many of the men most interested in such a question were rushed to the limit by duties in connection with the show, the special committee of the legislature held its hearing. The automobile men claim that they never received any notification that a hearing on the question was to be given at that particular time.

The joint special committee is made up of 26 members, but less than half that number attended the hearing. Two hours were spent listening to arguments in favor of the measure, and when the few members present were tired and anxious to get away the opposition was given its chance to be heard. Because of the lateness of the hour those who spoke in opposition had to be brief-much more so than the importance of the question justified. Then the hearing was declared closed. Here was a matter in which is involved the raising of thousands of dollars, which interests thousands of people throughout the commonwealth, particularly skilled labor, closed up in less than three hours.

There were only eight members present when the vote was taken to report the bill and the vote was five for it and three against it. One-third of the joint committee acted on it.

CONFIDENCE CAMES OF A COON.

Weary of a Cook's Career, His Fancy
Turned to Automobiling—Methods
that Led to the Penitentiary.

Those Cleveland dealers who were taken in by the smooth "Willieboy" who joy-rode for several weeks until the dealers awoke to the fact that they were being hoaxed, as described in last week's Motor World, are not the only "easy marks" in the world. From far distant Spokane comes the interesting story of how the dealers there underwent a similar experience. The difference in the tales is that the glib "Willieboy" of Cleveland "got away" with his trick while the Spokane "joy rider," who proved to be a negro cook with an imagination, received a sentence in the "pen."

George Moore, alias John Scott, was a negro waiter, that is, until he got tired of "turning 'em over," and "drawing them in the dark." George had been doing this sort of thing most of his 55 years, so he hardly can be blamed for giving in when the automobile bug lit on his neck and pinched him hard. Following which George, or John, as you prefer, donned a white collar, got a shave, had his hair well oiled and combed and strolled into the Rose Automobile Co.'s garage.

"I am a planter from Alabama," said Moore, "and I am here for the purpose of buying some land. Also, I want a good machine, for I want the necessary wherewithal to blow myself proper."

An employe of the company ran out the prettiest red wagon in the stalls, applied a turkey feather duster and invited Moore to a seat.

"We sell a first-class automobile," said the chauffeur who had essayed to conduct Moore on his trip of inspection of such pieces of property in the vicinity as might be suitable for the purposes of the "planter from Alabama."

"Yes, I like this car," replied the negro, and he blew smoke from a long, black cigar as he lolled back against the leather cushions.

The driver took Moore around for more than an hour, and he looked at the different pieces of property. When the ride was finished Moore returned to the front of a popular hotel, where he said he was stopping, and the chauffeur took his machine back to the garage. He said he believed he had made a sale.

Next day Moore appeared at the Rose garage and took another ride. For this privilege he paid \$10 with a check drawn on the Old National Bank, to which he signed the name of John Scott. Within a few days he stuck all of the automobile salesmen in Spokane and nearly became breathless several times taking fast drives. He drank his fill and on several occasions

he was so far under the influence of liquor that he almost fell from his seat. However, his plan progressed and he sated himself with automobile rides.

One day, however, a check Moore had laid down came back with a slip attached to it that said he had no funds in the bank. He was arrested and spent the next 15 months in the county jail. Recently Moore was released. Within 20 days he was back at his old tricks. The automobile worm had made its way into his system for keeps. Seeking new fields in which to conquer, Moore went to Coeur d'Alene, Idaho, where he enlisted the attention of an energetic real estate man who had a few choice ranches that were eligible for a change of owners.

The agent "fell" for Moore's talk that he was a rich planter from Alabama. He got an automobile and took the big negro out to see some choice bargains. Cigars and drinks came thick and fast. Moore, to do his part, cashed several checks for \$10 and \$20. He drew some on the Old National bank and some against banks in Alabama. All got the money.

Then again came the denouement. A check was returned to Charles Morgan with the information that there were no funds to meet it. Moore had disappeared, but was apprehended and bound over to the superior court.

"Ah's gilty, youah honah," said the tall black man, smiling as Judge Tuneke asked him if he had anything to say. He smiled as Deputy Prosecutor Kizer recounted his offenses and past record.

"Were you ever in trouble before?" asked the court.

"Ah wuz a cook in de regular ahmy in Wyoming and got pinched onct wid a lot o' cowboys and regulars fer creatin' a rough house. We was let out de nex' day, though."

"I think a sentence of from one to five years in the penitentiary will teach you a lesson," said the court, and Moore sighed.

To Carry Milk to the Babies.

Although Chicago at present is wrestling with a milk strike, that is to say, the drivers of milk wagons have had some differences with their employers and Chicagoans are in consequence suffering from a milk famine, the drivers' strike will not cut off the babies' food supply. The babies will be provided for even though teamsters and drivers should join hands in the effort to force dealers to pay the increase of \$5 asked by the milk wagon drivers' union. C. A. Coey, of the Coey Automobile Co., and C. W. Foster, of the Cadillac company, announced this week that if the strike continued they would volunteer to deliver milk each day in every Chicago home where there is a baby. Automobiles will be offered to dealers to deliver milk and cream to such households. Coey promises to furnish 30 cars and Foster as many more, and by making four trips a day they say they can guarantee deliveries to 50,000 households.

CHECKS WERE GOOD FOR A RIDE

Good for Nothing Else and Martin was Arrested—Purchase of a Car the Cause of His Undoing.

There is at least one hotel proprietor in Wichita, Kan., and several other business men, who are glad that a man giving his name as A. W. Martin has been arrested in Kansas City, following the unsuccessful attempt to secure an automobile by payment of a worthless check. Martin, or whatever his name is, first got into trouble in Oklahoma City where he was arrested on complaint of the Lee Hotel. He went to Wichita and registered at the Hamilton.

After a week's residence in that city. where he made several purchases with checks which afterwards proved to be worthless, Martin tried to dodge his board bill and that of the woman who was with him by throwing his personal effects from the second story window. He then went to Kansas City where he was arrested on the charge of obtaining money under false pertenses, after issuing a check for \$4,260 against the Kansas National Bank, of Wichita, in payment for a White steam car, obtained from the Wilson garage in Kansas City. Martin went a faster gait in Kansas City than in Wichita and Oklahoma, it appears. He registered at the Baltimore and spent most of his time, it is alleged, in writing worthless checks for his numerour purchases, and in securing free automobile rides until he was brought to book by the Wilson garage.

City Gets a Car Through a "Dicker."

For the sake of making what it considered a good automobile trade, the Cleveland city council authorized the board of public service to violate the State law requiring the board to advertise for bids when any expenditure above \$500 is made. The trade consists of an exchange of two old automobiles that have been used by the city paymaster for the last three years, for a brandnew five-seated car. In addition to the old cars the board will have to pay \$1,300, getting in exchange a car listing at \$2,600. The dealer allows \$500 apiece for the old cars, and puts in the new car at \$300 below list price. The council authorized the trade by a yote of 27 to 5.

Speed Limit for the Canal Zone.

ama capal zone is prohibited in an order issued by the President. This ordinance provides that any person driving an automobile exceeding 15 miles an hour on straight road or exceeding eight miles an hour when approaching curves, forks, or cross roads, is to be punished by a fine of not less than \$5 or more than \$100, or by imprisonment for not exceeding 30 days, or both.

The Week's Patents.

878,266. Vehicle Wheel. George W. T. Akehurst, White Marsh, Md. Filed Feb. 27. 1907. Serial No. 359,542.

1. A vehicle wheel having a central chamber provided with an annular wall; a hollow hub in said chamber and having perforated side walls; bolts passing through the annular wall and also through the perforations in the side walls of the hollow hub; rollers on said bolts to contact with the circular walls of the perforations, and a cushioning means interposed between the hollow hub and the walk of the chamber.

878,411. Carburetter for Internal Combustion Engines. Ogden Minton, Brooklyn, N. Y. Filed Aug. 2, 1907. Serial No. 386,685.

1. A carburetter comprising an air inlet, a fuel supply pipe, a valve therein, and a liquid receptacle containing a supporting valve, a float secured to said valve for immersion in said liquid, and means attached to said valve, upon which the inward suction of the air may act to raise the same.

878,429. Spring for Vehicles. Richard H. Stevens, Chigwell, and Timothy Hall, Romford, England. Filed Dec. 28, 1906. Serial No. 349,911.

1. The combination of a vehicle body and axle, a metal spring, an air cushion, a telescopic casing inclosing said air-cushion and comprising two shells which are elongated in the direction of the length of the vehicle and which fits loosely one within the other at their sides, anti-friction rollers for connecting said shells and transmitting the horizantally acting tractive forces from one shell to the other, means for securing said metal spring directly to one of said shells,

THE MOTOR WORLD

and means for connecting said metal spring and said casing in their united condition between the axle and the vehicle body, substantially as described.

878,435. Induction Coil. Richard Varley, Englewood, N. J., assignor to The Autocoil Company, a Corporation of New Jersey. Filed Feb. 8, 1905. Serial No. 244,720.

1. The combination of a box having secured to its wall two metallic strips, forming part of an electric circuit, and an induction coil unit provided with means for mechanical and electrical engagement with said strips.

878,454. Apparatus for Cooling the Brakes of Motor and Road Vehicles. Jules Caillet, Paris, France, assignor to Société Anonyme des Automobiles Peugeot, Paris, France. Filed Sept. 10, 1907. Serial No. 392,126.

1. An arrangement for cooling the brakes of motor road vehicles comprising air pipes leading to the brake drums, flexible pipe sections connecting the air pipes to the drums, air holes provided on the brake drums, and means adapted to cause air to pass through the air tubes, substantially as described and for the purpose set forth.

878,467. Induction Coil System. Israel C. Orswell, Amesbury, Mass., assignor to Orswell Igniter Company. Boston, Mass., a Corporation of Maine. Original application filed Jan. 25, 1906, Serial No. 297,792. Divided and this application filed April 20, 1907. Serial No. 369,211.

1. An apparatus of the class described, having a casing, an insulating base or block therein dividing the casing into upper and lower compartments, a vibrator device mounted upon said block in the upper com-

partment, said device comprising a pair of magnet coils secured to said block, a resilient armature carrying a leaf spring having its free end above the coils and held at its other end upon a support at the side of the coils and near one end of the block, an armature secured to the under side of said spring between the same and the coils, while leaving the spring free to vibrate, a resilient contact member carrying a vibratory contact, the said member being supported upon the base adjacent its opposite end, with its free end adjacent the coils, and at the side of the electro-magnet the said contact member having an anvil device underlying the free end of the resilient armature member, a stationary contact overlying the vibratory movable contact of the resilient member and also supported upon the base or block at the side of the electro-magnet, a hammer device on the end of the armature member adapted to strike the anvil device of the contact member on the attracted movement of the armature, and an adjustable stop screw above the resilient armature member to limit its upward and return movement.

878,754. Vehicle Wheel. Alan Sullivan, Toronto, Ontario, Canada, assignor to Grahame Jones, Chicago, Ill. Filed April 17, 1907. Serial No. 368,632.

1. The combination with a non-rotative axle provided with an annular seat, of a non-rotative bearing ring surrounding said axle, an annular, resilient cushion member interposed between said seat and the said bearing ring, a wheel-hub surrounding and turning on said bearing ring, said wheel-hub being provided at its ends with annular, inwardly extending flange rings, discs attached to and extending outwardly from the axle exterior to and in overlapping relation to the said flange rings, the disc on the outer

THERMOID Brake Lining

POSITIVELY WILL NOT BURN-GRIPS INSTANTLY-LASTS INDEFINITELY

Write for Particulars TRENTON RUBBER MFG. CO.,

2900 State Street, TRENTON, N. J.



end of the axle and the flange ring on the outer end of the hub being detachably se-cured to said axle and hub to permit the assembling and separation of the parts.

878,770. Carburetter. hill, Syracuse, N. Y. Filed March 14, 1907. Serial No. 362,265.

1. In a carburetter, the combination of a casing provided with a liquid containing chamber having a suitable source of supply, and a mixing chamber having a suitable outlet opening, a central vertical air inlet pipe extending from the bottom of the casing that the mixing chamber a conversal. ing into the mixing chamber, a sprayer affording communication between the liquid chamber and mixing chamber, and arranged above the air inlet pipe, a perforated diaphragm disposed in the mixing chamber, and a suction pipe connected to the mixing chamber at the outlet opening for the purpose set forth.

878,778. Changeable Gear Transmission Mechanism. James Dawson, Rochester, N. Y. Filed Oct. 12, 1906. Serial No. 338,532.

1. In a power transmitting mechanism, the combination with a driving shaft, a counter shaft operated thereby and a driven shaft, of a plurality of ring gears of uni-form interior diameter arranged to encircle the driven shaft and operated by the countershaft, bearings for the gears independent of the driven shaft clutch devices on the inner circumferences of said gears, a sliding clutch member secured against rotation on the driven shaft and adapted to separately engage the clutch devices on the gears to interlock the latter and the driven shaft and means for operating said sliding mem-

878,786. Speed Controlling mechamsm for Motor Vehicles. George W. Dunham, Lansing, Mich., assignor to Olds Motor Works, Lansing, Mich., a Corporation of Michigan. Filed March 18, 1907. Serial, No. 362,904.

1. A controlling mechanism for motor vehicles, comprising a hand operated rock shaft, a cam mounted thereon, a throttle actuating lever having a bearing at one end thereof upon said cam, a foot operated device for independently actuating said lever to separate the same from said cam, and yieldable means for returning said lever and pressing the same against said cam.

878.824. Carburetter for Explosion Engines. William H. Newbrough, Lansing, Mich., assignor to The "New Way" Motor Company, Lansing, Mich. Filed Sept. 12, 1907. Serial No. 392,419.

1. In a carburetter, the combination of a carburetter chamber having an air inlet at its lower end and adapted to be connected at its upper end to an explosion en-gine cylinder; a fuel delivery pipe, provided with an upwardly directed delivery opening. arranged in a horizontal position, through the wall of said carburetter chamber, such delivery pipe having a reducing plug at its outer end; a fuel supply pipe arranged in a vertical position, a valve casing connecting said fuel supply and delivery pipes; a ball check valve arranged in said valve casing; a butterfly valve arranged in said carburetter chamber below said fuel delivery pipe: a stem for said butterfly valve, arranged through the well of said carburetter chamber; a hand-piece of said stem, having a per: a nand-piece of said stem, naving a curved slot therein; a stop pivotally mounted on said valve stem, a set screw carried by said stop, arranged through said slot in said hand piece, whereby said stop may be secured in its adjusted position thereon; and a stop on said carburetter chamber, arranged to co-act with said adjustable stop of said hand piece, all co-acting for the purpose specified

878,924. External Valve Chamber. Geo. H. Woodward, San Francisco, Cal. Filed Jan. 11, 1907. Serial No. 351,895.

1. A gas engine of the two cycle type comprising a cylinder, a piston therein, said piston having a central opening in its upper end and a passage leading from one side near the top to said opening, an external valve chamber secured to the cylinder, the cylinder wall having ports connecting said value chamber with the said passage, when the piston is at or near the end of its out-ward or working stroke a valve in said valve chamber controlling said ports, a governor, means for actuating the valve from the governor, the cylinder wall and said piston having ports connecting said valve chamber with the interior of the cylinder below the piston when said piston is at or near the limit of its working stroke, said cylinder wall having on the side opposite said valve chamber an inlet port below the piston adapted to be uncovered by the piston at or near the limit of its compression stroke and an exhaust port adapted to be uncovered by the piston at or near the limit of its working stroke.

878,932. Vaporizing Device for Internal Combustion Engines. Francis W. Brady, Englewood, N. J. Filed Aug. 22, 1904. Serial No. 221.651.

1. In a vaporizer for internal combustion engines, a fuel port, means for feeding fuel through the port into the vaporizer at in-tervals, and means for creating a back-draft through the port after the fuel feed.

878,933. Fuel Feeding Mechanism for Internal Combustion Engines. Francis W. Brady, Englewood, N. J. Filed April 14, 1906. Serial No. 311,765.

1. In an internal combustion engine, a valve provided with a vaporizing surface across which the air entering the combus-tion chamber passes, a stem for said valve, a series of ducts arranged about said stem in the form of a cone, a distributing recess communicating with said ducts, and means for feeding a liquid fuel to said distributing recess under pressure and thence through the ducts onto the vaporizing surface.

878,934. Fuel Feeding Mechanism for Internal Combustion Engines. Francis W. Brady, Englewood, N. J. Filed April 14, 1906. Serial No. 311,766.

In an internal combustion engine, a valve having a vaporizing surface, a stem on said valve, an oil chamber surrounding said stem, a partition between the chamber and the stem, a plurality of ducts through said partition and spaced about said stem, and a valve in the oil chamber controlling said ducts, whereby when the valve is open oil flows from the chamber through the ducts and down the stem onto the vaporizing surface.

878.937. Spring Wheel. Samuel S. Childs, Barnardsville, N. J. Filed Feb. 15, 1907. Serial No. 357,515.

1. In a spring wheel, a resilient block, a cup on one end of the block having a marginal flange to embrace the block, means for securing the block to the felly of a wheel, a screw threaded plate, a ring sliding on the block and having an internal screw thread on one end to engage the plate, and means for attaching the plate to the rim of a vehicle.

WANTS AND FOR SALE

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

1908 Winton Sixteen-Six; new; \$3,600. X, care Motor World, Box 649, New York City.

FOR SALE—Haynes Model O, 4-cylinder 30 horsepower, in first class condition; just overhauled at factory; Sprague top, speedometers, shock absorbers; tires in good condition; must sell; have bought another. H. B. COBLENTZ, M.D., 649 Florida Ave., N. W., Washington, D. C.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

Before You Buy a Car
telephone a Mitchell agent and tell him you
want to be shown the "silent argument" the
Mitchell offers in demonstration. He'll be
glad to show you—call him up—it's worth
money to you if you are thinking of buying
an automobile. (No obligation.)
MITCHELL MOTOR CAR CO.,
281 Mitchell St., RACINE, WIS.

'CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade two and four cylinder motors, 10 to 25 horsepower. They are equipped with self-contained oiling system and ready for attaching magneto. Highest grade workmanship, efficient, durable and simple. Also clutches and trans-Send for catalogue.

CONTINENTAL MOTOR MFG CO., Muskegon, Mich. K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill. T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.



If you are Interested in Motorcycles

THE BICYCLING WORLD and MOTORCYCLE REVIEW

Will Interest You. Published Every Saturday by

BICYCLING WORLD CO., 154 Nassau St., New York City

Solar Lamps

on Thomas

New York to Paris Flyer

The Thomas Flyer, the American entrant, now close on to 2,000 miles ahead of its nearest opponent in the New York to Paris Race has complete Solar lighting equipment. On all the best cars you will find SOLAR LAMPS. They "Show the Way."

Write for new 1908 Catalog

BADGER BRASS **MANUFACTURING** COMPANY

Two Factories

KENOSHA, WIS.

436 Eleventh Avenue **NEW YORK**



TRIUMPH GREASE THE LATEST AND BEST ON THE MARKET

WHAT IS IT LIKE?—It is the only "Spongy" Grease in the world. Its velvety consistency is just heavy enough not to run out and leak. Saves labor in cleaning machine. Will not stick or gum. Not effected by heat or cold. WHY NOT TRY IT?

You will never know its merits until vou do. Why be bothered with a smeared machine, when you can procure a lubricant that will NOT leak out, and lasts LONGER than any other? Those who are on the alert for the BEST, usually get it!

Put up in 5, 10, 25 and 50 lb. cans.

Manufactured only by the

Perfection Grease Company,

South Bend, Ind.



Just what its name implies

SPLITDORF COMMON SENSE PLUC

Made of the best material, in a'l sizes and threads—Extremely serviceable and reliable, and fulfills to perfection the purpose for which it was made.

PRICE \$1.25 and guaranteed for a year.

C. F. SPLITDORF, Walton Ave. & 138th St., NEW YORK

MOTOR MAKERS



that's what we are. made the motors in some of the most successful cars, for years. years. Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

The Western Motor Co., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

With All the Life of Metal Retained and Built with the Knowledge of Long Experience

Our experience in successfully meeting extraordinary requirements has taught us that the dynamic stress or combination of shock, push and twist to which automobile springs are subjected, can only be resisted by the use of a material of high dynamic qualities, made up by a process that will preserve all the initial life of the metal and constructed on mechanically perfect principles.

In our Special Vanadium Spring Steel, we have the right material: In our thermo static furnaces, the right method of retaining the "life" of the metal, and from our wide experience, the correct mechanical principle for successfully resisting these conditions and making "anti-fatigue" springs that are as nearly perfect as can be.

Our new booklet on springs explains these points in detail. Let us send it to you to-day.

send it to you to-day. THE CLEVELAND-CANTON SPRING CO., Canton, Ohio, U. S. A.

Send for 1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

BRUSH \$500 RUNABOUT

We are getting ready for the rush. Having been sold up every minute since the first week of January we know what fair weather is bringing and have prepared for it with more machinery, increased orders for stock and more room.

Still if you want to handle Brush Runabouts this year, take it up at once. Best way is to come to our factory, if possible. Don't delay, we will soon be sold up for the

BRUSH RUNABOUT CO., Detroit

"EISEMANN" Magnetos

WIN AGAIN

SAVANNAH RACE

MARCH 19, 1908

ISOTTA FRASCHINI..... FIRST ACME THIRD

Both equipped with the

"EISEMANN MAGNETO"

Of the FIVE CARS that finished the race THREE were equipped with "EISEMANN MAGNETOS."

LAVALETTE & CO., 112-114 West 42d St., New York City



RAJAH" SPARK PLUGS

ICNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

> TRONG-DURABLE CALELESS—RUSTLESS MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO

NEW SENSATION

Equip your car with

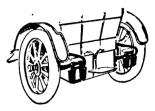
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch Removed to New York Meter Mart Bidg.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



& SONS SHIP BUILDING COMPANY, Philadelphia, Penna.

AUTOMOBILE BODIES



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished RACINE NOVELTY MFG. COMPANY. Racine, Wis.



Hotel Tuller

New and Absolutely Fireproof. Adams Ave. & Park St. **DETROIT, MICH.**

AUTOMOBILE **HEADQUARTERS**

In center of Theatre, Shopping and Business district. and Business district.

Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
Ala Carte Cafe Grill Rooms
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.
L. W. TULLER Prop.
M. A. SHAW, Mgr.

This is the

PULLMAN



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO.. York, Pa.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed

WITHERBEE IGNITER CO.

1876 Breadway, New York



1908 Model D. 50 H. P.

New factory, Saginaw, Mich.

Complete catalogue now ready.

RAINIER MOTOR CAR COMPANY,

Broadway, cor. 56th St.

New York.

Exclusive LOGAN

-Front axle heavy I beam manganese bronze, specially trussed by patented device.

For other features write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chillicothe, O.



Boston Branch Motor Mart 91 Church St.

New York Carford Motor Car Co.

CHAS. F. KELLOM & CO., Philadelphia, Pa.

"AURORA" THE

Runabout \$775—20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS,

THOMAS

America's Champion in the New York-Paris Race Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

Better Because Regular

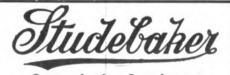
An Oberdorfer Pump never "sticks." It works in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St.. Syracuse, N. Y.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MFRS. TOPEKA, KANSAS



One of the Leaders. Studebaker Automobile Co., South Bend. Indiana

TRUFFAULT-HARTFORD

SHOCK ABSORBER

Mark The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department I.

HARTFORD SUSPENSION CO., E. V. Hartford, Pres. 66 Vestry St., New York

\$250 "SUCCESS"

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra powerful engine,
patent ball-bearing wheels; price \$275. Also 10 h. p.,
\$400. Rubber Tires, \$25 extra. Write for descriptive literature. tive literature

Success Auto Buggy Mfg. Co., Inc. 531 De Bailvere Ave., St. Louis, Me.

THE WORLD'S STANDARD

FIRESTONE TIRE & RUBBER CO., Akron, Ohio

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name.
Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.

THE CHANDLER

Name Plates and Stampings SPRINGFIELD, MASS.



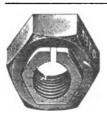
MICHELIN TIRE CO..

Militown, N. J.

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgoport, Conn.

LONGEST

EMPIRE AUTOMOBILE TIRE CO., TRENTON, N. J.

NEW YORK—148 Chambers St., and Broadway and 73d St. CHICAGO—20 LaSalle Street and 1615 Wabash Avenue. FOBES AUTO SUPPLY CO., Portland, Oregon. DEN FOBES AUTO SUPPLY CO., Seattle, Washington. WAITE AUTO SUPPLY CO., Providence, R. I. St. BOSTON—292 Devoushire Street.
BUFFALO—724 Main Street.
DENVER AUTO GOODS CO.—Denver, Colo.
PENN AUTO SUPPLY CO.—Philalelphia, Pa.
SAVELL, RUBBER CO.—Jacksonville, Fla.



\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumptio.. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY AUBURN, IND. Box No. 250

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

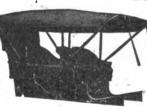
SINGLE CYLINDER CADILLAC showing actual cost of maintaining their cars. It also contains much advice of value to the automobile buyer. Ask for free copy of Booklet No. 6.

CADILLAC MOTOR CAR COMPANY, Detroit, Mich. Member Assn. Licensed Auto. Mfrs.









ontinental Ready-Flated Tires.

They reduce tire expense

CONTINENT AL CAOUTCHOUC COMPANY 43 Warren Street, New York City.

"Keep your eye on Continentals"



A.O.SMITH CO.

High-Grade Axles



Pressed Steel Frames

Steering Columns

Transmissions

Steel Stampings of All Kinds Send Prints for Estimates

243 Clinton-Street.

MILWAUKEE, WIS.

A SUPERB LINE OF CARS THE JACKSON "No Sand Too Deep-No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO., Jackson, Mich.



Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture... New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Stee! Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio,



For catalogues, address THE CONTINENTAL AUTO MFG. CO.

Address Eastern Inquiries
Garford Motor Car Co.
of New York
1540 Broadway,
New York City. Western Inquiries Garford Motor Car Co. of Cleveland 1372 East 12th St., Cleveland.

RIVEN

The car which has no clutch to stinno gears to strip-no grease-no noise.

THE \$1350 CARTERCAR

The Motorcar Company, Detroit, Mich.

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

MCKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY

NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

Powerful

Silent

Fast

TYPE C 50 HP

2800 LBS 2800 WITH MACHETO 3000 00



Luxurious and Completely Appointed

PENNSYLVANIA AUTO MOTOR CO.,

Brvn Mawr. Pa.

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

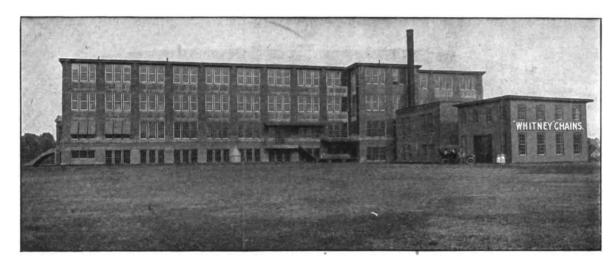
Enclosed find \$2.00 for which enter my subscription to

The Motor World

for one year, commencing with the issue of

Name. Address

Digitized by Google



We are now well settled

New Factory and

READY TO SHOW RESULTS

Prompt Delivery and Constant Improvement in Quality

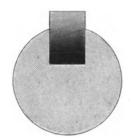
In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

We will now make all sizes of Roller and Bushing Chains for which there is a reasonable demand.



"WHITNEY" MACHINE KEYS and KEY SEAT CUTTERS
(For the Woodruff Patent System of Keying)



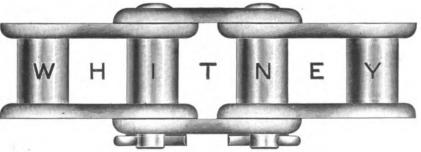






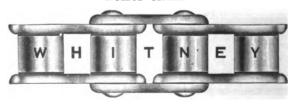
We carry 95 regular Sizes of keys and cutters in stock for immediate delivery

"Whitney" Detachable Bushing Chain-Patented



Bushing Chains are like Rolier Chains Without Rolls

Rolier Chain



The Whitney Mfg. Co. Hartford, Conn.

TRY MILLER

This expression has developed into a trade term

THERE'S A REASON

The public, which in the past, has experienced difficulty in obtaining automobile supplies should give us a trial, by mail, or a personal visit-



We Carry in Stock the Largest Assortment of PARTS, FITTINGS AND SUNDRIES

To be Found in this Country

Our Catalog, the most complete one of its kind, is an encyclopedia of motor car supplies; it is used daily by other supply houses and they could not get along without it. A copy mailed to any one on request.

Order from nearest Branch and save time and express charges.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE: 97-99-101 Reade Street,

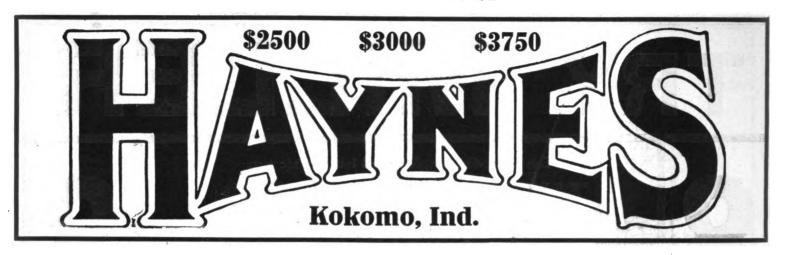
3

t

ES

NEW YORK CITY

R E S



National

Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K—4-cyl., 4%x5 \$3500

Model R—6 cyl., 4½x4¾ \$4200

Model N—4 cyl., 5x5 \$3700 Model T—6 cyl., 5x5 \$5000



Write for Particulars

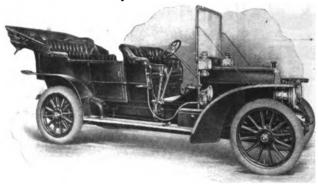
National Motor Vehicle Company

1607 East 22d Street
INDIANAPOLIS. - IN





Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.

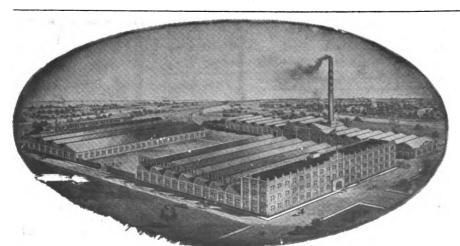


DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Palers are wanted in all localities where we are not now represented.

Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L.S.& M.S. Ry. & Edgwater Park CLEVELAND, ONIO, U.S.A.



THE FORT GEORGE HILL CLIMB

(NEW YORK, APRIL 9)

First Contest in 1906 to determine the relative merits of all the leading makes of automobiles, both American and Foreign

SHOWS A SWEEPING VICTORY for the "FULL-JEWELLED"



30 H. P. Stock Roadster, selling at \$2,500. Time, 424/s seconds. [Winner in its class, gasoline cars, selling from \$2,000 to \$3,000 [Winner in class open to cars of all types selling for \$2,000 or \$3,000. [Made faster time than any gasoline car selling for \$4,500 or less. [Defeating the Pope-Hartford. Stoddard-Dayton, Knox, Oldsmobile, Stearns, Simplex and Renault four-cylinder cars; Stearns, Stevens-Duryea and Hotchkiss six-cylinder cars and THIRTY OTHERS. [The Corbin wins because it is a 30 H. P. car that actually delivers 30 H. P. at the rear wheels,—because the entire car, motor and transmission, runs on imported ball bearings,—because the construction of a light weight car allows the use of none but the best materials.

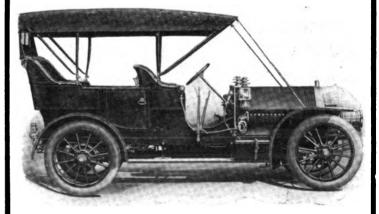
ASK OWNERS OF CORBIN CARS HOW THEY STAND UP IN EVERY-DAY USE.

CORBIN MOTOR VEHICLE CORPORATION.

NEW BRITAIN, CONN.



THE "JEWEL 40" THE "NON-SKIDDING" CAR



Compare following specifications with other cars at \$3,000.

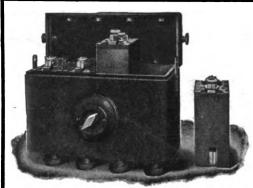
36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40.45 H. P. 4-cylinder engine. Timken axies. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY

234 Walnut Street,

Massillon, Ohio, U. S. A.



1988 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.



With All the Life of Metal Retained and Built with the Knowledge of Long Experience

Our experience in successfully meeting extraordinary requirements has taught us that the dynamic stress or combination of shock, push and twist to which automobile springs are subjected, can only be resisted by the use of a material of high dynamic qualities, made up by a process that will preserve all the initial life of the metal and constructed on mechanically perfect principles.

In our Special Vanadium Spring Steel, we have the right material: In our thermo static furnaces, the right method of retaining the "life" of the metal, and from our wide experience, the correct mechanical principle for successfully resisting these conditions and making "anti-fatigue" springs that are as nearly perfect as can be.

Our new booklet on springs explains these points in detail. Let us send it to you to-day.

THE CLEVELAND-CANTON SPRING CO., Canton, Ohio, U. S. A.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

> TRONG-DURABLE SCALELESS—RUSTLESS
> MOOTH—PAINT ADHERES FIRMLY

A Metai That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO



A NEW SENSATION

Equip your car with

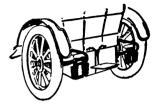
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will still be with you, but you won't know it. Our new booklet is

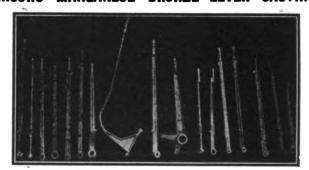
interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch Removed to New York Motor Mart Bldg.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



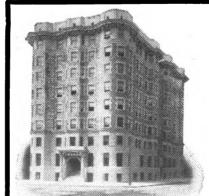
Sole Makers & SONS SHIP CRAMP BUILDING COMPANY, Philadelphia, Penna.

AUTOMOBILE BODIES



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished RACINE NOVELTY MFG. COMPANY, Racine, Wis.



Hotel Tuller

New and Absolutely Fireproof. Adams Ave. & Park St. **DETROIT. MICH.**

AUTOMOBILE **HEADQUARTERS**

In center of Theatre, Shopping and Business district.

and Business district.

Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
A la Carte Cafe
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.
L. W. TULLER Prop.
M. A. SHAW, Mgr.



Six-Sixty Runabout, 6 Cylinder 60 H. P., \$2,850.

Palme r-Singer Town and Country 28-30 H. P. \$3,000



Four-Forty, Seven

EXHIBITION NOW 0 N

The "Skimabout" is the best runabout in the world, bar none, for city use-and far better than most for country use. For the man who has little chance to go touring far afield it fills a long felt need.

Metropolitan Distributors the Selden Palmer & Singer Mfg. Co.

The "Long-Arm" System Co. Cleveland. Ohio

We would like to send you our cuts and prices on

1909 Model Auto Parts

Axles (3 sizes), Clutches, Reaches, Buffers, Propeller Shafts, Hand Levers, etc.

We make a specialty of accurate gear cutting, hardening and grinding. Are you having any of the usual troubles? Perhaps we can help you to better things: we have helped some pretty good people lately-people who know their business pretty well, too. Perfect gears for rear axles or for transmissions don't grow on every bush. We have been "through the mill," our knowledge comes from the "lessons of adversity"; try us.

SALES DEPT.

AMERICAN DISTRIBUTING CO., American Trust Building, CLEVELAND, OHIO

One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us — it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out - that hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co. 166 Wheeler Ave., Beloft, WIS.

ADD TONE

to your 1908 car with a Gabriel Exhaust Horn.



GABRIEL SHOCK ABSORBERS SMOOTH OUT THE BUMPS

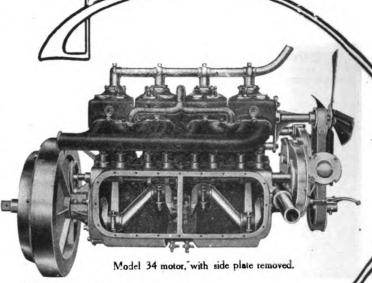
Relieve your engine of the back pressure from the muffler with our new Cut-Out Valve.

Write for booklet and prices.

GABRIEL HORN MFG. CO. CLEVELAND, OHIO 1417 E. 40th Street.

A Detail of Convenience

Accessibility to every working part from above, is a notable feature in the construction of the



For example, the motor, shaft and bearings are usually reached by removing the lower half of the crank case. This necessitates the removal of the boot or mud apron under the motor, a tedious and unpleasant job.

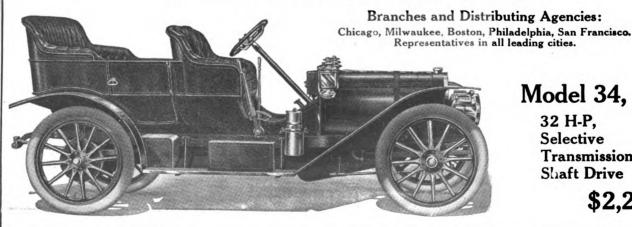
The Rambler crank case is not built that way. The entire side is removable, leaving an opening 8x23 inches that affords ample access to the entire crank shaft and cam mechanism without removal of or interference with any other part of the mechanism.

Transmission gears, differential and all other parts are equally accessible.

This is one of the little things that in the aggregate make the Rambler the leader of American cars. Our catalog tells the rest. Write for it or see our nearest representative for demonstration.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin.



Model 34,

32 H-P. Selective Transmission, Shaft Drive

\$2,250.

EFFECTS OF NEW YORK CARNIVAL

Beneficial in a General Way Though Unattended by Direct Results—Automobile Interests Stimulated.

Whatever its effect in respect to actual sales, there can be no doubt that New York's automobile carnival, which closed on Friday night with a smoker tendered by that superb local organization, the Automobile Club of America, accomplished wonders in the way of stimulating the spirits and energies of the men engaged in the business. A distinctly better tone pervades the entire local trade.

Practically all of the dealers and branch managers agree that the carnival had resulted in much desirable publicity and automobile interest, and was, generally speaking, a good thing, but a canvass of more than a dozen of those handling well known cars, after a lapse of several days had permitted any effervesence to subside, failed to disclose more than one who was willing to say that the festival actually had assisted in the promotion of sales.

Manager Bennett, of the White branch, stated that the victory of the White car in the hill climbing contest, which was one of the features of the carnival, had led to a number of sales, but he could trace none to the parade or the other events.

"All such affairs are of some value," he said, "but if any one can trace sales directly to their influence, I'm willing to admit that he has a better imagination than I possess."

Connecticut Claims Basic Coil Patent.

The Connecticut Telephone & Electric Co., of Meriden, Conn., have purchased of E. Q. Williams, Syracuse, N. Y., patent No. 884,116, issued on the 7th inst., and which they claim is the basic patent on the removable unit multiple coil. Williams's application was filed Dec. 28, 1904, but since that time it has been involved in an inter-

ference brought by Richard Varley, which, according to the Connecticut company, resulted in the final award of priority of invention to Williams. As a result of the purchase, the Connecticut coils hereafter will be made under the Williams patent, Williams himself retaining the right to market his own coils under arrangement with the Connecticut people, who intimate that suits several for infringement are in prospect, that type of coil being in general use.

New Company Buys Shoemaker Plant.

The much-troubled Shoemaker Automobile Co., of Elkhart, Ind., founded by the incubator manufacturer of that name, finally has ceased to exist. The trustee has sold the assets to a new corporation, the St. Joe Motor Car Co., which was formed for the purpose and which will continue the manufacture of automobiles in Elkhart. The officers are: Charles S. Conover, president; Oval G. Sellers, vice-president; Michael J. Feckler, secretary and treasurer. Scott Van Etten will be the superintendent. These men, with Charles A. Cooper, E. L. Shires and Charles LeTempt, constitute the incorporators. All of them previously were connected with the Shoemaker establishment. The capital stock of the company is \$50,000, which is said to have been fully paid in.

Splitdorf to Open Chicago Store.

Charles F. Splitdorf has completed arrangements for the opening of a Chicago branch at 319 Michigan avenue. It will be in charge of B. P. Houlihan, long identified with the Splitdorf establishment, and will, of course, carry a full stock of Splitdorf coils, plugs and other ignition specialties. The Brandenburg Bros. Co. also will establish a store at the same address.

McCord May Remove from Chicago.

McCord & Co., the well known Chicago manufacturers of lubricators and radiators, contemplate removal from the Windy City. Their representatives recently visited South Bend, Ind., where a number of factory sites were inspected.

G&J TIRE LOSES ON APPEAL

Judgment of Lower Court Affirmed—Decision Declares no Tires were Made in Accordance with Chief Patent.

Upholding the decision of Judge Buffington in the lower court and employing his language as its own, the United States Circuit Court of Appeals for the Third Circuit, has rendered judgment in favor of defendants in the case of the G & J Tire Co. vs. Pennsylvania Rubber Co., which involved the G & J patents on the clincher type of tire.

Judge Buffington's decision, which was rendered in September last, affected four patents, Nos. 454,115, 558,956, 466,565 and 523,314, none of which he ruled had been infringed. When the G & J company carried the case to the higher court, they based their appeal on patents Nos. 454,115 and 558,956. The appeal was heard by Judges Gray, Cross and Holland, the opinion sustaining the lower court being written by Judge Holland.

The gist of the decision is that the G & J Tire Co. never had made a tire in accordance with the provisions of the patents in question. The burden of the Pennsylvania Rubber Co.'s defense was, of course, that of non-infringement, although they admitted that their tire was similar to that described by the Golden patent, No. 493,160, which also was the property of the G & J company, but which had expired and become public property before they (the defendants) began the production of such tires.

Judge Holland's decision in full is as follows:

This case comes here on an appeal from a decree of the Circuit Court of the western district of Pennsylvania dismissing the bill. In the court below infringement was charged as to four patents. On this appeal two of the patents are dropped, and the two relied on were granted to Thomas B. Jeffery for inventions in vehicle tires. The infringement is charged as to claims 1. 2, 3, 4, 5 and 6 of letters patent No. 454,115, issued June 16th, 1891,

on application filed March 26th, 1891, and claims 5 and 10 of letters patent No. 558,956, issued April 28th, 1896, on application filed April 1st, 1891. In the opinion of the Circuit Court, reported in 155 Fed. Rep. 982, it was held that infringement was not proven, for which reason the bill was dismissed,

Rubber tires have been used on vehicles for a number of years, particularly upon bicycles, and at first were solid and attached to the rim of the wheel by various devices. Improvements in the art followed rapidly, both as to the construction of the tire and the mode of adjustment, so that by the time they had advanced from bicycles to automobiles, the art had progressed from the solid to the cushion, and thence to the pneumatic form. Patents were issued for each of these improvements, both as to the construction of the tire and the mode of attachment.

The oldest and most obvious form was the solid tire consisting of mere hoops or bands of rubber, with some means of attachment, such as screws or bolts. Then was introduced the tube extending through the inside of the rubber tire so as to give it more elasticity, and was called a cushion tire. In still others, this tube was filled with compressed air to still further increase the elasticity, They were and these were called pneumatic tires. attached to the rim of the wheel by bolts, diverging flanges or ears, wire bindings, and sometimes by cement. But, however, attached, and whether the tire itself was solid or cushion or pneumatic, it invariably, in this stage of the art, was completely formed and self-sustaining both before attachment to and after detachment from the wheel; and in every case the means of attachment, whether bolts, ears, wires or cement, was a mere addition to complete the tire, performing no function in resisting any strain from within the tire. Up to this time they contained no sheath, but every advance was patented, both as to construction and mode of attachment. Next was developed the tire containing a sheath, which is not made up until attached to the wheel, and in which the wheel rim and sheath together form a girdle to restrain the tube from burst-

The Dunlop was the progenitor of this class, and was patented in England March 8th, 1889, and in the United States No. 435,995 on September 9th, 1890, upon an application filed March 11th, 1890. It is referred to in the first patent in suit, to-wit, No. 454,115, descriptively as "a tire having a core composed of elastically-expansible tube, which is inflated by air or gas distended thereby to some extent, the air or gas being under such tension that but for a restraining or enclosing sheath such core would be liable to burst."

The claim in Dunlop's patent is as follows:

"In hollow air-inflated wheel tires for cycles and other vehicles, the combination, with an inner expansible tube and outer protective covering of strengthening folds or layers of cloth, canvas, or linen, and protective strips of caoutchouc interposed between the edges of the rim and strengthening fold or layer, substantially as and for the purpose herein set forth."

Besides this, there is one other patent of importance in considering the state of the art in connection with the questions at issue. This patent was issued in England to Golding on December 8th, 1890, and in the United States (No. 493,160) on March 7th, 1903, on an application which had been filed October 6th, 1891. It was for an improvement in rubber tires and rims for velocipedes and other light carriages. We find from the specifications that "The edges of the rim are bent round and brought a short distance toward each other and nearly parallel to the flat surface of the rim, thus forming an inner recess or groove along the rim on both sides, suitable for holding the projecting flanges of the The tire contained a corresponding lateral flange, which was inserted into this recess and secured by the pressure of the compressed air when the tire was inflated.

Claim 1 is as follows:

"The combination with a metallic wheel rim having lateral recesses formed by reflexing the edges, of an inflatable tire having corresponding lateral flanges which are detachably inserted into such recesses, and are secured therein by the pressure of the contained compressed air when the tire is inflated substantially as hereinbefore set forth."

(Continued on page 92)

The Week's Corporations.

Chicago, Ill.—Michelin Tire Co., under Illinois laws, a New Jersey corporation, with \$3.000,000 capital; to sell tires. Corporator—C. Harbridge, Chicago, Ill.

Boston, Mass.—Automobile Time Saver Repair Kit Co., under Massachusetts laws, with \$5,000 capital. Corporators—James H. Rand, James H. Rand, Jr., Boston, Mass.

Buffalo, N. Y.—Griffin Double Tread Car Wheel Co., under New York laws, with \$200,000 capital. Corporators—H. F. Griffin, W. A. Griffin, E. B. McKenna, Buffalo, N. Y.

New York City, N. Y.—Axle Cushion and Motor Co., The, under New York laws, with \$250,000 capital. Corporators, J. B. Roberts, L. B. Leavitt, H. B. Shonk, New York City, N. Y.

Elkhart, Ind.—St. Joe Motor Car Co., under Indiana laws, with \$5,000 capital. Corporators—C. S. Conover, M. S. Feckler, O. G. Sellers, E. L. Shires, Charles Le Tempt, C. A. Cooper, Scott Van Etten.

Hartford, Conn.—Nevels Mfg. Co., The, under Connecticut laws, with \$100,000 capital, to manufacture automobiles, coin controlled machines, boilers, engines and elevators. Corporators—Anthony L. Nevels. Frank J. Kňox, I. G. Cranton.

Elkhart, Ind.—Elkhart Motor Car Co., The, under Indiana laws, with \$100,000 capital, to manufacture automobiles. Corporators—Dr. Edward C. Crow, Franklin O. Hudson, Charles L. Monger, Martin E. Crow, Willard W. Sterling, Elkhart, Ind.

Inwood, N. Y.—Chandler Co., The, under New York laws, with \$30,000 capital; to manufacture chains and supplies for automobiles, motors, boats and launches. Corporators—W. A. Reinhart, H. Golden, Inwood, N. Y.; H. H. Chandler, New York City, N. Y.

In the Retail World.

Perkins & Corliss of Gloucester, Mass., have opened their garage at Manchester for the summer season.

F. W. White, a Chelsea dealer, was one of the victims of the great fire in that Massachusetts city on Sunday, 13th inst. His establishment at 44 Fourth street was destroyed.

Work has begun at Mitchell, S. D., on the construction of a building for the Mitchell Auto and Supply Co., which has just been formed and has secured agencies for several cars. The building will be two stories, 25x60 feet, with a basement of the same dimensions.

J. F. Crutchfield has been elected president and manager of the Charleston (S. C.) Motor Co., succeeding T. B. Jenkins, of Sumter, S. C., who takes the vice-presidency. E. B. Gunter, Jr., succeeds J. E. Richard as secretary and treasurer. The

company has the Reo and Premier agencies and operates a repair shop at 161 Meeting street.

George A. Kuntz. at present dealing in bicycles, feed and coal, at 1205 Twenty-fifth street, Des Moines, Iowa, is preparing to enter the automobile trade as a dealer, repair man and garage proprietor. He has begun work on a one-story building fronting 100 feet on Cottage Grove avenue, and extending back 80 feet.

The Galesburg Automobile Co. is the name of a new concern which is refitting the old Western Tool Works garage on South Prairie street, Galesburg, Ill. A. A. Addis, of Victoria, and J. E. Whitten, of Duncan, are the moving spirits. The company will sell the Glide, Jackson, and Kiblinger cars. A garage and repair shop business also will be conducted.

Construction work is to begin within a few weeks on a brick building on Hudson street, Oklahoma City, Okla., to be occupied as an automobile depository. It will be the center of distribution in the southwest for the Winfield Auto Co., of Winfield, Kan., and will be managed by C. D. and G. J. Fritz. The building will be 50 feet wide, with a solid glass front, and will extend back 100 feet. The estimated cost is \$5,000.

London Bus Interests Amalgamating.

At a meeting called for the purpose of effecting the amalgamation of the London General Omnibus Co., and the Vanguard Motorbus Co., London's two great public service companies, the chairman of the former corporation forcibly called attention to the causes which have led to a rapid succession of re-organizations and amalgamations during the tumultuous four years since the first motor omnibuses were put into regular service in the city.

"No sooner had they made their appearance," he said, "than those vultures of the commercial world—the company promoters-appeared on the scene and worked the new craze for all it was worth to them. They appealed to the public for money to float companies, and a wave of financial lunacy appeared to spread over the public at that time, and they shoveled hundreds and thousands of pounds into the shares of those companies." The efforts to reestablish the confidence which was shaken by the ill-organized ventures appear to be taking the form of a general consolidation of the more successful organizations, while the weaklings are being crowded out of existence.

San Diego Dealers Get Together.

The Automobile Dealers' Association of San Diego, Cal., has been formed with F. D. Naylor as president, L. Parker Thompson secretary, and H. N. Hanshue treasurer. It proposes to hold the first race meet on the Gay Speedway at Lakeside, Cal., in May.

POPE RECEIVERS ADD TO BALANCE

Report of March Transactions Shows Big Increase—Volume of Sales for the Month Exceeds \$200,000.

The report of Receivers Pope and Yule covering their transactions for the Pope Mfg. Co. during the month of March shows a big increase in the cash balance. The figures as filed in the Superior Court at Hartford are as follows:

Balance in banks and c fice, Feb. 29, 1908 Receipts from collectic counts and notes rec Pope Mfg. Co.: Hartford accounts Westfield accounts	ons of ac- eivable of	\$12,605.8
Hagerstown accounts.	746.83	
Receipts from sales by	\$8,007.50	
receivers	166,756.58	
Receipts from deposits		
by customers on or- ders for automobiles Interest on accounts	2,920.00	
and notes receivable.	13.97	
Refund of travelers' advances	31.15	
Receipts from and for account of:—		
Receivers in Mass.,	E00.40	
(Westfield) Receivers in Maryland.	590.49 1,156.23	
Receivers in New Jer-	1,130.23	
	122.02	
Receivers in Toledo	16.55	
_	\$1,885.29	179,614.49

Cash disbursements for March	, 1908.
Refund of deposits received on miscellaneous undelivered orders	\$249.32
Pay rolls factory and office	46,158.75
Miscellaneous and selling ex-	,
penses	2.838.04
Materials and supplies	51,485.51
Premiums on insurance	603.82
Patent fees and expenses	50.00
Disbursements of attorneys for	84.97
receivers	04.97
Payments in settlement of accounts with:—	
Receivers in Massachusetts	861.26
Receivers in Maryland	5,030.08
Receivers in New Jersey	206.20
Receivers in Illinois	59.80
Receivers in Toledo	131.81
Receivers in Indianaphlis	6,669.55

\$192,220,36

¢114 420 11

	\$114,469.11
Balance in American Nat. Bank Balance in First Nat. Bank Cash in office	266.19
	\$77,791.25
Accrued liabilities of recei	vers.
For materials, supplies and mis-	
cellaneous expenses	\$70,998.92
For pay rolls factory and office	12,837.07
	\$83,835.99
Balances due receivers of Pope	
 Mfg. Co. and Pope Motor Car 	•

Co. in other districts \$1,674.78

Accounts receivable from sales of receivers January 31, 1908, per
last report \$134,007,39
Sales by receivers for month of March, 1908

	\$338,625.89
Less cash collections	
for month of	
March, 1908\$166,756.5	8
Deposits credited to accounts receivable.	
cash discounts and	
accounts 9,369.2	
4	- 176,125.82

Balance due from receivers of Pope Mfg. Co. and Pope Motor Car Co. in other districts for transfers of merchandise and supplies and advances for expenses

E. V. Receivers Make Good Report.

\$162,500.07

\$7,723.38

In accordance with the requirements of the Connecticut law, the receivers of the Electric Vehicle Co. last week filed in the Superior Court, Hartford, an account of the business done by them during the month of March. The report is as follows: Charges on account and cash sales, \$37,457.21.

Purchases on account, \$7,559.15; cash, \$181.12.

Cash Statement.
Receipts.
Cash on hand March 1, 1908.....\$30,056.90
Cash collected on E. V. Co. acct. 1,138.37
Cash collected on Receivers acct. 41,514.16
Cash collected on misc. sales.... 1.57

	\$72,711.00
Disbursements.	•
Pay roll	\$10.997.49
Traveling expense	240.00
Purchase creditors	4.152.04
Receivers' salaries	1.800.00
Receivers' bond	
Refund of Adv. payment	
Freight and express	
Telephone and telegraph	
Salesmen's commissions	
Petty cash	
Operators' license	
· ·	
	\$19,894.09
Cash receipts	\$72,711.00
Cash disbursed	19,894.09

Three Apples Form New Company.

Balance on hand April 1\$52,816.91

H. F. Apple, O. D. Apple and V. G. Apple have withdrawn from the Dayton Electrical Mfg. Co., Dayton, Ohio, and have gone in business in that city as the Apple Electric Co. V. G. Apple, however, still retains his interest in the Dayton Electrical Mfg. Co., and will continue to serve as its vice-president. The Apples will make storage batteries and other appliances.

Court Orders Sale of Berkshire Assets.

The court having ordered the sale of the assets of the Berkshire Motor Car Co., Pittsfield, Mass., the receiver has set April 25th as the date for the auction. Everything will be disposed of save the notes and accounts receivable.

TO RETIRE FROM SHOW BUSINESS

A. C. A. Regards Its Condescending Cooperation as no Longer Necessary— Hoyt Explains Its Attitude.

Reports that the Automobile Club of America would have no more to do with shows, which were current immediately after the Grand Central Palace show in New York last October, were given confirmation on Tuesday evening last when Colgate Hoyt, the retiring president of the organization, rendered his report. After remarking that despite the financial upheaval which was precipitated during the week of the show, a profit of \$40,000 had been earned, Mr. Hoyt advised that the club cease to participate in such affairs. The exact language of his recommendation is so condescending in tone as to be worthy of a Shattuck and for the first time will cause the men in the industry to realize how poor and weak they must have been without Mr. Shattuck's club.

"I would draw the attention of members to the fact that the Club held the first show in this country in 1900, at a time when the industry was young and needed its support and influence; that it has always stood for an open show and fair play to any manufacturer who had a legitimate product to exhibit," said Mr. Hoyt. "I am of the opinion, however, that the manufacturers are now, in their several associations, sufficiently strong to conduct their own shows without our support or assistance, and that the Club should now retire from the field and direct its energies and activities along the many other avenues of endeavor which will make for the general good of all motorists.'

When the Motor World reported that the A. C. A. contemplated action of the sort, diplomatic evasion was made; and within the past month the American Motor Car Manufacturers Association, which for three years had joined with the A. C. A. in the promotion of the "independent" show in New York, let it be known that a renewal of such relations was not impossible. The manufacturers' association now has in contemplation a traveling show to visit the leading cities.

Prest-o-Lite Plant Sent to Suburbs.

As a result of the two disastrous fires in its plant, the Prest-o-Lite Co. have had a hard time in inducing the city council of Indianapolis to grant them permission to do business within the city limits. After a long fight, however, and by a vote of 13 to 7, an ordinance was passed last week, per mitting the company to maintain a storage plant on East South street, but requiring that the producing and compressing plant he removed far out in the country district.

The Mitchell

The car you can afford to buy—and



The Mitchell appeals to you, Mr. Business Man, because it gives you just as much pleasure—just as much and as good service, is just as stylish and neatly finished as any car, and doesn't cost you a small fortune to buy—or keep.

The Mitchell at \$2000 is the standard automobile value.

Prove it-Mr. Business Man.

Get demonstrations of the extravagantly high-priced cars—and then try the Mitchell over the same route.

The Mitchell agent will be glad to take you out if you're interested for 50 or 100 miles any time you say. Call him up (it places you under no obligation)—Challenge him—

Just say, "Show Me."

He'll come around with a car and show you a "silent argument" that will get your order or he will retire without a word.

Our catalog No. 18 is fully descriptive of the Mitchell 1908 Touring Car \$2000—Limousine \$2800—Roadster \$1250 and Runabout \$1000. Write for it—we'll also send letters from users, proving the Mitchell to be the most economical car to operate.

Mitchell Motor Car Co. 281 Mitchell Street, Racine, Wis.

Member American Motor Car Mfrs. Ass'n.

Just say "Show me"

This car—shown here—35 h. p., 4 cyl., speed 50 miles, finished in Mitchell blue—price \$2000—is excellent throughout—the car you ought to have at the price you ought to pay.



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



WHITE WINS FORT GEORGE HILL-CLIMB

A 30 horse-power White Steamer scored the fastest tim in the great hill-climb in New York on April 9th, making the ascent of Fort George Hill from a standing start in 32½ seconds, as compared with 36 seconds, scored by the fastest of the gasoline cars. All makes, domestic and foreign, claiming special hillclimbing ability, were represented in this contest.

The White has won so many important hillclimbs that its superiority in this style of competition is no longer questioned. The reasons for this superiority may be stated as follows:

- 1. The White engine, when called upon to do so, can probably develop more power than any other type.
- 2. It is certain that a larger percentage of the power of the engine is delivered at the rear wheels in the White than in any other machine. This was proven with mathematical exactness in the great English contest at South Harting, held for the purpose of determining this point.
- 3. The question of proper gearing for different gradients is not a vital one in the case of the White, as the car adapts itself perfectly to varying conditions. In other words, the unique flexibility of the White is of considerable advantage in hill-climbing contests, just as it is in touring or in city use.

Catalog, Bulletins and White Route Books sent on request

THE WHITE COMPANY CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Chicago, 240 Michigan Ave. Philadelphia, 629-33 N. Broad St. Pittsburg, 138-148 Beatty Street.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . . 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

£3 Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 16, 1908

The Matter of Special Bodies.

It is not so vary long since it was confidently predicted that the immediate future of the retail market would consist of a demand for chassis on the one hand and for bodies on the other, the two requirements being sufficiently distinct to warrant a direct ascent into the field of specalization in both cases. That the verification of this forecast is still a long way off, if indeed, it ever will come about, requires no argument by way of proof. The only practical change which has developed is in respect to the number and variety of models produced by the makers which in many instances reveal no points of difference extending below the chassis line, and in others, only such as are comparatively trivial in their nature.

A rather surprising trend which is observable this year more than ever before, however, which is quite apart from any prediction ever made, is revealed in the atti-

tude of a considerable number of buyers who pay the closest attention to the design and construction of the chassis, but manifest an astonishing amount of indifference as to the body. So long as the car is what they want, mechanically speaking, the body requirements may be briefly summarized as comprising a place to sit down and something to hold on to. It may be that more substantial bodies are generally contemplated as a later investment, it may be that the growing use of the closed car for autumn and winter running has tended to reduce the outlay which is considered expedient for purely fair weather bodies, and so for the first investment. At all events, neither the chassis alone, nor the complete car equipped with an expensive body are in any way the rule of the day.

Certainly the business in custom-made bodies has not expanded as had been expected. This is perhaps more than half accounted for by the fact that the average owner finds himself pretty much at sea when it comes to drawing the specifications for a body which exactly fits his ideal. Usually it is a great deal easier to follow in the footsteps of his neighbor who has purchased from stock, than to assert his independence by following new and untried lines.

About Mr. Hower's "Blind Run."

Thanks to his versatile press bureau, the reasons why Chairman Hower, of the A. A. A. Touring Board, personally is the beginning and the end, and all that lies between, of the Glidden touring contest, now are perfectly and deliciously clear. The chief reason is that "when the contest is under way, it is similar to the forced march of an army" and therefore requires a "commander"

Last year when a committee was in charge and when contentions arose, contestants appealed to various members thereof and as a result Mr. Hower found cause for embarrassment. Therefore, according to his press bureau, "the situation has been sanely solved" by making the chairmanship "autocratic" and fully responsible, which even his defender admits is "ethically a high handed usurpation of committee powers."

As a matter of fact, there is nothing ethical about the usurpation of power; it is very real and intensely practical. The like of it probably was never known before in the history of sport. Mr. Hower's usurpation begins long before the "army" begins its

"forced march." For he alone has power to reject entries and observers; and not merely during the "march," but afterwards and up to even the final award, he alone has the power to alter, add to, suspend or repeal the rules or any part of them. In other words, and to all intents and purposes, the only standing rule that must be followed and obeyed is Hower himself. It were better, therefore, that photographs of the gentleman himself be presented to the contestants instead of the long assortment of regulations that has been put into type. The latter mean nothing. The photograph stands for the only genuine, blown-in-thebottle rule that must be observed.

The Motor World is not insensible of the imperative necessity for undivided responsibility on occasions of the sort. Mr. Hower, however, appears to have used a magnifying glass in viewing his trials and tribulations of last year, for despite appearances, the Glidden touring contest differs little from any other contest. For every contest of whatever sort there is a referee. After the event has been organized and is ready for the road or track or field, he assumes command. The authority and responsibility belong to him alone. His duty is to enforce the rules without. fear or favor. He cannot go behind them. He cannot become a law unto himself. He cannot require contestants to do that which is not required by the rules.

When that sort of thing obtains, the contest ceases to be a contest. It becomes a "blind run"; and, without intending offense, it is fair to say that "Hower's blind run" is a more fitting designation than any other for the forthcoming Glidden touring contest, or "forced march," or whatever else it may be styled. It is all Hower. He can go behind the so-called rules whenever the whim seizes him. He is not merely superior to them; he is the Only Rule. And not even his active and efficient press bureau has attempted to answer the question: What will happen to the contest, if anything happens to Hower?

It may be true, as stated by one of its officials, that the Automobile Club of America is regarded abroad as the "national club in this country" and that it has "binding treaties with every foreign national automobile club of importance;" if it is true, the joke is on the foreigners. Everyone in America, excepting probably a Mr. Shattuck, who looks like a foreigner

and tries to act like one, and a few other persons, is well aware that the A. C. A.'s chief claim as a national organization rests in its name. It is undoubted that the club contains a number of wealthy and eminently respectable New Yorkers, one of whom manages the garage where Mr. Shattuck keeps his cars, but lately it has become better known as a place where spark plugs, axle grease and accident insurance may be purchased at cut rates.

If the various trade organizations do not hold a joint meeting and pass resolutions of thanks to the Automobile Club of America for the manner in which it has acted as the wetnurse for the industry during all these years, the tradesmen will be guilty of gross ingratitude! Of course, it will be news to many of them that the A. C. A. has been their wet nurse, but all who note the gracious condescention with which the club makes the statement in practically announcing its withdrawal from the show business cannot fail to be convinced. It is awfully nice of the club to tell the industry that it is now such a big boy that it can cast loose from mamma's apron strings.

If Chairman Hower's press bureau is anxious to indulge in further explanations, it might point out the necessity for increasing the entry fee for the Glidden contest from \$100 to \$200. As last year's affair netted a profit of \$1,100, the only apparent reason for the increase seems to be Mr. Hower's written prophecy that his committee would have a surplus of \$5,000 by the end of the present season. The "forced march" already is sufficiently expensive without "piling on the agony" for the mere sake of money-making.

In case it is decided to repert the New York automobile carnival parade in other years, it will be wise for the promoters to undeceive themselves. It will require no very extended inquiry to discover that there were very few of the tens of thousands who lined the route who had eyes for other than the relies and the decorated cars.

Those New Jerseymen who purposed fighting Frelinghuysenism to the b-i-t-t-e-r end should now get together again and sing the doxology. The carpetbag senator has had enacted a law which makes it a mis-demeanor to throw glass in the highways.

THE MOTOR WORLD

STATISTICS OF THE DENVER SHOW

Opening Attended by 3,500 Visitors—Half a Hundred Makes of Cars Staged— Big Display of Accessories.

Coloradans are long on statistics. They can almost tell one just how many and the the number of species of trees to be found in the Uncompangre national reserve or how many "lungers" locate in Denver each season. Therefore, to gain a clear comprehension of the magnitude of Denver's annual show which held forth in the Mammoth skating rink on April 6, 7, and 8, it is only necessary to quote a few figures. Numerals are impressive, anyway.

The total value of exhibits was \$335,-955.85; the value of cars on the main floor was \$260,955. Having learned this it is quite a simple process to determine the value of the accessories staged in the gallery. To find the answer subtract the smaller sum from the larger. The number of exhibitors was 55, and of this number 25 showed automobiles. To ascertain how many accessories exhibitors the same process may be repeated. The total number of cars shown was 104, comprising 51 makes. Of the total number 79 were gasolene, 22 electric and 3 steam cars. The passenger seating capacity of the cars shown was 394, while the total horsepower was 2,382, almost enough to pull Pike's Peak from its solid foundation if it could be applied in just the right way. The ground floor space amounted to 17,000 square feet, and there were 3,000 of this kind of feet in the gallery. On the opening night 3,501 persons saw the show. The decorations consisted of white pillars, dogwood blossoms and snowballs. Having detailed all these facts there remains only the list of exhibitors showing cars to append, which is as follows:

Charles Bilz, Franklin; George Hering, Stanley; Havens Auto Co., Lambert, Dorris, Atlas; Mathewson Automobile Co., Thomas-Buffalo, Thomas-Detroit, Oldsmobile and Columbus; Felker Auto Co., Stevens-Duryea and Pope-Waverly; Chicago Auto Co., Locomobile; A. T. Wilson, Kisselkar, Earl and Wayne; Studebaker Automobile Co., Studebaker; Wood & Barnett. Stoddard-Dayton; Tom Botterill, Pierce, Pope-Hartford; E. R. Cumbe, Mitchell and Rambler; Tobin Motor Car Co., Peerless and Fritchie; MacFarland-Powell Auto Co., Packard and Buick; Reo Auto Co., Reo and Premier; George E. Hannan, Jackson; Denver Motor Car Co., Great Smith and Carter; Colorado Auto Co., Cadillac; Newbold & Co., Speedwell; Colburn Auto Co., Colburn. White and Rauch & Lang; Fernald Auto Co., Inc., Maxwell; Donaldson Motor Car Co., Gaeth, Cameron and Regal; Cross & Van Hoogenhuvze, Jewell; H. A. Trinkle, Brush; Wood, Erickson & Trim-

COMING EVENTS

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

April 29, 30 and May 1, Detroit, Mich.—Detroit Automobile Dealers' Association's three days' reliability run to Saginaw, Kalamazoo and return.

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

ble, Mason and A. B. C.; Covington Motor Car Co., Aerocar.

Chalmers Lets Fall Opinions.

"Heretofore automobiles have been bought; now they must be sold," is the manner in which Hugh Chalmers, president of the E. R. Thomas Detroit Co. summarizes the existing situation.

Mr. Chalmers was for years the selling expert of the National Cash Register Co.. a concern widely known for its wonderfully efficient selling organization, which Mr. Chalmers himself built up. His specialty is selling and it is natural that he should realize most keenly the demands of the automobile business from a selling standpoint.

"The country must be so districted and the selling force so organized that dealers or agents can call upon the prospective buyers quickly and frequently." he says. "These dealers must be taught the superior features of the cars they sell. And their agencies or branches must be organized to give efficient service to users at reasonable prices.

"The automobile business has got to a point where it is going to be a case of the survival of the fittest. And the fittest will be those manufacturers who not only make the best cars but also build up the best selling organization."

NEW JERSEY GOES THE LIMIT

Frelinghuysen's Ideas are Enacted—Increased Fees, No Non-Resident Privileges, and Same Speed Limit.

That more or less distinguished New York Jerseyman, Joseph S. Frelinghuysen, who serves as a Senator for the State of New Jersey, although he actually resides in New York City, has accomplished his "squeeze." When the thumbscrews are applied, it is estimated that about 250,000 fine, large dollars will fall from the pockets of automobilists into New Jersey's treasury, Frelinghuysen's amended bill has been passed by both the Senate and the House and will become operative immediately it is signed by the Governor.

According to several reports, Assemblyman Colgate had succeeded in having the speed limit increased from 20 to 30 miles an hour, but this is not the case; in fact, some legerdemain appears to have been practiced in the final shuffle as the so-called tourists' or non-residents' registration fee—50 cents for a period of six days—was dropped entirely and does not appear among the amendments that were enacted, As a result, residents and non-residents alike must pay the following fees for using what are erroneously termed the public roads:

	Registration.	License.
10 h.p	\$3	\$2
10 h n 40 20 h n		2

The higher rating will govern the fee in each instance,

The blanket registration fee of \$20 for dealers and manufacturers, has been superseded by a fee of \$5 per car.

The fee for motorcycles has been doubled—from \$1 to \$2—and henceforth they must carry a tag.

The commissioner of motor vehicles will hereafter supply the number plates which must be carried front and rear.

All registrations and licenses will expire on December 31st of each year, instead of one year from the date of issue, as at present.

For the benefit of non-resident cab companies, the new law provides that in return for a fee of \$100 they may operate as many as 15 automobiles, if they do not carry passengers for a greater distance than 15 miles into New Jersey.

The Commissioner of Motor Vehicles is authorized to employ not exceeding 10 inspectors and to provide them with motorcycles. They practically will be mounted constables. They will be paid \$3 per day. In addition, the commissioner may designate twenty citizens as "special inspectors." They will serve without pay.

The new measure will prohibit any one under 16 years of age from driving an au-

tomobile. Drivers' licenses will be of two classes. The first class certificate—fee \$2—will permit the men to operate only cars of less than 30 horsepower; the second class;—fee \$4—will permit the operation of cars of any power.

All other requirements of the existing law are retained.

When the "Human Bridge" Collapsed,

Motor cars appear to possess an irresistable attraction for, the restless souls who invent circus "stunts," and though the result of the performances which they evolve are not always as much in doubt as they appear to the audience, such is not always the case. In the course of a circus performance in Brussels, recently, a heavy touring car was being driven over a "bridge" supported by two athletes who upheld it by lying on their backs with their feet in the air. For two successive evenings the feat was performed successfully, but on the third, the driver of the car felt the bridge begin to give just as the car was well upon it. It being too late to think of backing off, he dropped into high gear and attempted to "rush it" before the crash came. In this, he was successful to the extent of charging into a box office, which happened to be , empty at the time and smashing both it and the front of the car. The "bridge" collapsed, however, before the weight of the machine had left it, and the human abutments were seriously and perhaps fatally damaged.

Two Years for St. Louis Motorists.

Automobiles in St. Louis county, Mo., must carry both the State and the city license and identification tag on their cars, in spite of the effort of Henry S. Turner to free them of this necessity. Turner applied for an injunction to restrain Louis Alt, license commissioner, from compelling him to affix the city tag. His contention was that the State law specifically asserted: "Said owner shall not be required to place any other mark of identification upon his vehicle." Judge Rule denied Turner the injunction sought, declaring that the provision cited referred only to State marks of identity and not to any provisions that city may have made. He ruled that the city council could compel the display of a city tag in spite of the provision of the State law.

Dates Fixed for Detroit's Contest.

The Detroit Automobile Dealers' Association will hold its annual three days' reliability run on April 29, 30 and May 1. The first day's run will be to Saginaw and the second day to Kalamazoo. The last day's journey will be back to Detroit, a total distance of 412 miles. The cars will be placed in one class, the only stipulation being that they must be of standard classification. Penalties will be, imposed for time spent in repairs and for being late at controls.

ALASKAN ROUTE IS ABANDONED

American Entry Finds It Impossible—Returning from Valdez and Will Follow
Others to Siberia.

No race ever developed a more complicated or perplexing situation than now exists in the New York to Paris scramble. Finding the Alaskan trails from 10 to 15 feet deep in soft snow and not even as wide as the car, the Thomas party, the only American members of the expedition, and the leaders up to this point, were obliged to turn back after a stay of a little over one day at Valdez. News of this reached the Italian and French contingents Tuesday of this week, on their arrival at Seattle, and with common consent they turned about and took the first boat leaving for Yokohama. From that point, they will cross Japan to Tsuruga, a distance of 200 miles and more, and ship their cars to Vladivostok.

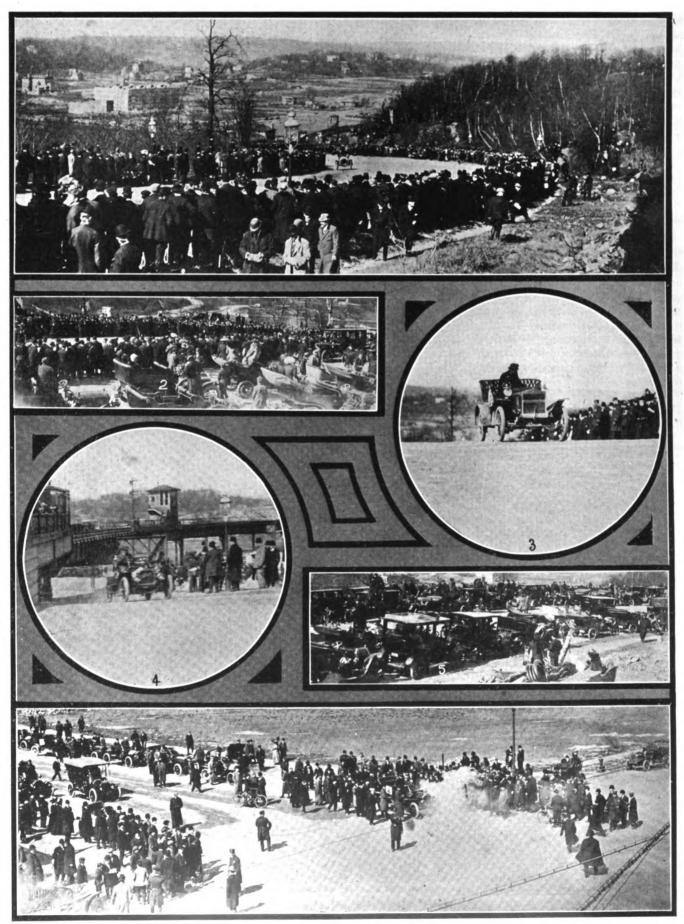
The Thomas car, which is expected to reach Seattle to-morrow, on its return from the north, will be shipped to Vladivostok direct, on Saturday. Allowing for delays in Japan, the two parties probably will reach Vladivostok at about the same time.

Should the Italians reach the starting point ahead of the American party, it is stated they will be ordered to await their arrival according to the terms of an agreement entered into by representatives of the respective companies while the Thomas car will still in San Francisco. Even so, the Thomas car will have lost its two weeks' lead, and will start on foreign soil on even terms with the others. It will thus stand a chance to win the race for the third time as the Thomas people explain. They say:

"It has already defeated the entire field by a sufficient margin to prove finally and conclusively that it is the best car for American road conditions and American road travel. Secondly, it has won the race according to the original rules, by going farther over the original course than any of the other competitors. It now remains for the Thomas, starting on an even footing with the foreigners on foreign soil, to demonstrate its superiority over these cars on their soil as conclusively as it did in its own country."

The oft-repaired German Protos car made another start from the Union Pacific railroad repair shops at Odgen, and headed over the road for Seattle, last week, but broke down after proceeding as far as Pocatello, Idaho, and was shipped to its destination on a flat car. It is announced that it will go to Siberia with the Thomas car, and continue the race as a "non-contestant," but as later reports say that Lieutenant Koeppen, its conductor, has dissipated his entire personal fortune on the venture, who will "pay the freight" appears uncertain,

THE MOTOR WORLD SCENES AT THE FORT GEORGE HILL CLIMBING CONTEST.



1—General View of the Hill and the Crowd. 2—Spectators Massed Beside the Course. 3—Charles Fleming (Maxwell), Winning in His Class. 4—The Narrow Pass Under the Elevated Railway. 5—Automobiles Parked on the Hill. 6—General View at Starting Point.

CARNIVAL SPORT AT FORT GEORGE

Biggest Hill Climb Ever Viewed by Thousands—White Finishes both First and Second in Free-for-All.

The "King" and the "Queen" having had their brief reign, the next brilliant page in the history of New York's automobile carnival last week was turned on Thursday, 9th inst., when the hill climb up the Fort George incline took place. In point of competitors it was the biggest hill climb that has yet been held in America, no less than 71 cars being sent up the 1900-fect, 10 per cent, grade in less than

cylinder cars costing more than \$4,000 in 3844 seconds. Two features of the meet were the even distribution of honors, and the close times in all events. J. W. Swan, Corbin, and William Bourque fought a real battle in two classes, both going to the former by narrow margins. Charles Fleming. Maxwell; Ward Olney, Mitchell; Robert Burman, Jackson, and P. J. Robinson and Guy Vaughn were among the other prize winners, while H. E. Wagner beat Robert Clyde by nearly half a minute in the electric class. Each rode in a Babcock electric and the big crowd cheered when both pulled up the hill in good time. Charles Lane, White, had a walkover in the steam car class.

A more picturesque spot than Fort

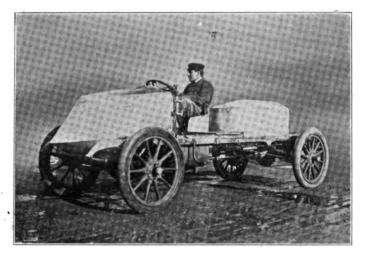
veal a dozen sales. Even the youngster who sweetly called out "sowveneer" hats, and advertised his wares by wearing two—one red, the other green—at diverging angles on his head, was disheartened. One peanut vendor almost had to be restrained from casting himself before the oncoming juggernauts.

"Jees, vat a crowd!" he exclaimed disconsolately, "no vun vants to eat peenits today."

It would not be fair to pass without notice of the cripple who mechanically rolled tumblers back and forth on a board and assured all who stopped to listen that he had the only "real hill climbers," although his tumblers only rolled one way—down hill.



J. W. SWAN (CORBIN), TWO TIME WINNER



WALTER C. WHITE (WHITE), WINNER OF FREE-FOR-ALL

two hours. With a squad of mounted police at the foot of the grade and a score or more of ordinary "cops" lined along both sides of the Belgian block course, the competing drivers had no fear at any time that they might charge into any of the 10,000 or more spectators that witnessed the short flights. The Belgian blocks were somewhat "cobbly" and without intending a pun, it follows that the steering wheels were decidedly "wobbly" as the cars bumped over the rough surface. There was no confusion at any time and the instant one car was reported at the finish line, another was immediately dispatched from the start, the finishing cars returning to the base of the hill by a back route.

The fastest flight of the day was made by Walter C. White, of Cleveland, when in the free-for-all he flew up the slope in his odd looking White steamer in 32½ seconds, an average of 40.2 miles an hour. White has the unusual distinction of paradoxically finishing first and second in the same event. He entered two cars and in the second one White scored the second best time in the same event, the second flight requiring ½ second more than its predecessor. The fastest time in the stock car events was scored by P. J. Robinson, Stevens-Duryea, who won the class for six

George hill for a hill climbing contest cannot be found around New York. The only thing that mars its beauty is the sight of prosaic apartment houses in the distance and the prevalence of theatrical and real estate bill boards on the hill itself. For this reason the peep of the Hudson river through two massive hills off to the north loses its value as a scenic delight. The day was perfect, excepting for the strong breeze that made more than one unfortunate wish he hadn't put his winter overcoat under the protection of moth balls at the sign of triple balls. The only persons who did not seem to mind the wind were several Postal messenger boys who carried on a game of ball in a lot at the bottom of the hill, and the entire Junior class of New York University. The students were enjoying a three days' suspension for having ducked a fellow student in the college fountain, and the hill climb occurred at the right time for them. The only absent one was the student who had been hazed.

It was unmistakably demonstrated that a New York gathering is not a souvenir crowd. Anticipating a thriving business, all the button men had laid in a big supply of dinky little "carnival buttons" and flags. A hasty survey of the crowd failed to re-

It was a bad day for business of this sort. The crowd was not buying. It was a free show, so what was the use of spending one's money recklessly? Seeing that the crowd didn't "bite," the fakirs, like Arabs, silently stole away before the last two events, with determination on their faces to make up the financial loss at the next Richmond county fair.

All the nurse girls from the Inwood and Spuyten Duyvil districts, not forgetting one white-aproned servant who came all the way from the "Bron-nix," were there. The last named caused some excitement when Walter White made his spectacular flight. The nurse girl was so eager to get a view of the racer that she quite forgot her charge, and perambulator and Napoleon Newlywed started to emulate White by racing down the hill, it being easier going than would have been the opposite direction, and besides it was pointed that way. A convenient rock stopped the perambulator fifty feet from where it had started and besides a frightened cry, that was a cross between a wail and a whoop, Napoleon was unhurt. The maid was more frightened than anyone else.

This was the only near-casualty of the afternoon, which is remarkable. Fort George hill itself is wide enough to pre-

clude any possibility of accident on its wide curves, but to get upon the hill proper the cars had to pass through a needle's eye at the bottom where the overhead subway entrance makes the road at that particular point just about wide enough for a car to squeeze through and nothing to spare. The fact that all the events were from a standing start reduced the danger at this point to the lowest possible minimum, and it is to the credit of the drivers' trained eyes that not one miscalculated the width of the "squeeze."

The hill presented an animated appearance. All the competing cars were parked in the streets at its base, together with several hundred pleasure vehicles, while that many more afforded grandstands at the summit. The hill on both sides of

spicuous in every event of importance for the last three years. White has other clothes but this is the outfit he always dons when he has a victory in mind. Thus far they have proved a pretty good mascot.

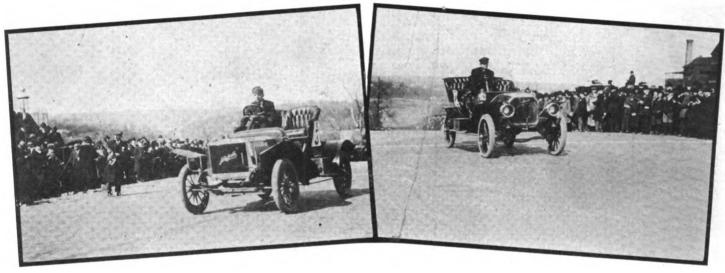
The meet got its start when two Maxwells, driven respectively by Charles Fleming and J. Ross, competed in the class for gasolene cars costing \$850 and under. Fleming beat his stable mate by some seconds in 1:193%. Ward Oldney, Mitchell, had his innings in the next round for cars costing between \$851 and \$1,250. The electrical timing apparatus which, by the way did not once go out of commission, gave him 1:071%. R. L. Lockwood, Reo, and Thomas Forbes, Overland, tied for second place in 1:141%. This was the first time the Overland has competed in the

took four-fifths of a second longer to finish. Leonard Zengle, Pennsylvania, and J. P. Grady, in another Pope-Hartford, ran a dead heat for fifth place, each being timed in 49 seconds.

Swan and Bourque had another battle royal in the open class at the same price limitations, the former winning by 23/5 seconds in 42/5. Barbour, Corbin, was third, and F. Cimiotti, Pullman, fourth.

The class for four cylinder cars costing more than \$4,000 looked like a family party, as nine of the competing cars wore the same name plate. Guy Vaughn won in 421/4.

The free-for-all brought out the "big ones" and as the cars in this event did not have to conform to catalogue specifications, and could strip if their drivers desired, it



WARD OLNEY (MITCHELL) AND ROBERT BURMAN (JACKSON). COMING TRIUMPHANT OVER THE BROW OF THE HILL

the street was lined with spectators three or four deep, while all the high rocks overtopping the east side of the street, above which the Fort George pleasure grounds rise "moneymakingly," held living lichens. Near the top of the hill, in sight of the finish line, was a natural amphitheatre which held several thousand people, and which resembled the bleachers at a league ball game in mid-summer.

About 200 White rooters stormed the highest and biggest rock half way up, and from their lofty citadel kept the crowd informed that the White was going to shove Father Time into the Atlantic ocean, Hoboken or some other place. The White company had distributed several thousand aluminum "noisy snapper jacks" and the crowd worked over time to get a putty-put-put-puty-put-put sound from them. When the several thousand went off at once, the battle of Port Arthur must have been a Quaker first day meeting in comparison.

There was no need to consult programs when White finally did shoot up the hill in a cloud of steam. His half-smile is almost historic, and besides he wore the same Norfolk jacket, corduroy "knickers" and leather cap that have made him con-

cast. Robert Burman, Jackson, who finished last in that class, made the best time in the event for cars between \$1,251 and \$2,000. The apparatus gave him 523/5 seconds, and Harry B. Tucker, Corbin, gave him a close "rub" by reaching the top in 554/5. Chris White, Aerocar, was third.

P. J. Robinson took the next two events—for gasolene cars between \$3,001 and \$4,000, and for six cylinder cars costing more than \$4,000. In the former event he was timed in 45 seconds flat, with Frank McCaffrey, Cleveland, the runner-up, in 553/5, and in the sixes' picnic he drove a 50 horsepower car in the fast time of 384/5. Guy Vaughn was second.

The biggest event of the meet, which brought out 15 starters, was the class for gasolene cars costing between \$2,001 and \$3,000. It produced the finest competition, so far as hill climbing sport goes, as all the cars, with one exception, scored under a minute. It went to J. W. Swan, Corbin, who made a clever ascent in 43½ seconds, with William Bourque, Knox, a close second in 46½. J. P. Grady, a veteran hill climber, was timed at 47 seconds flat in his Pope-Hartford, while the next best was Charles Miller, Stoddard-Dayton, who

was natural that fast times should result. Walter White drove the same car that made the fastest times at the Wilkes-Barre and the Cleveland climbs last year. Later he steered another stripped White in the same event, and came within one-fifth of a second of the record of 32½ seconds, which he made with his racy looking car. Emanual Cedrino, with a 60 Fiat Cyclone racer, was third in 37, and P. J. Robinson was fourth. Edgar Apperson, Apperson, was timed in 38 seconds, and John B. Ryall, in his big Matheson finished sixth. The summaries:

Free-for-All.

1 Walter-C. White	30 White. 0:32 15 30 White. 0:32 25 60 Fiat 0.37 50 Stev-Duryea 0:37 35 62 Apperson 0:38 60 Matheson 0:40 3 30 Pope-Htfd 0:42 3 30 Knox 0:43 45 50 Pennsylvania 0:45 7 45 Renault 0:47 45 40 Stod-Dayton 0:49
11 H. S. Hodson	40 Stod-Dayton 0:49
12 Clarence H. Lane	20 White 0:5213

Four Cylinder Gasolene Cars— \$4,000 and Over.

2 II 3 K 4 I 5 F 6 C	Guy Vaughn 30 D. E. Farrell 30 Kingsley Swan 30 M. Travis 30 Frank Lescault Carl Broessel A. J. Picard 30	-60 Stearns -60 Stearns -60 Stearns -50 Simplex 50 Simplex	0:42 35 0:42 35 0:42 45 0:43 45
----------------------------------	---	--	--

	0-60 Stearns 0:46 0-60 Stearns 0:46 0-60 Stearns 0:47 0-60 Stearns 0:48 5-45 Renault 0:49 1 to \$3,000.
1 J. W. Swan	30 Corbin 0:42 % 30 Knox 0:45 30 Corbin 0:48 % 40 Pullman 0:49 % 5-30 Knox 0:52 % 20 White 1:07
Gasolene Cars,	\$2,001 to \$3.000. 30 Corbin 0:43 \\\ 30 Knox 0:46 \\\ 30 Pope-Htfd 0:47 \\ 40 Stod-Dayton 0:44 \\\ 50 Pennsylvania 0:49 \\ 40 Pullman 0:49 \\ 30 Pope-Htfd 0:50 \\ 30 Corbin 0:50 \\ 40 Stod-Dayton 0:54 \\ 45 Glide 0:55 \\\ 45 Glide 0:55 \\\ 45 Clide 0:55 \\\\ 45 Clide 0:55 \\\ 45 Clide 0:55 \\ 45 Clide 0:55 \\\ 45 Clide 0:55 \\ 45 Clide 0:5
Gasolene Cars, 1 P. J. Robinson 2 Frank McCaffrey	\$ 3,001 to \$ 4,000. 35 Stev-Duryea 0:45 40 Cleveland 0:55 1/4 42 Mora 0:58 1/6 0-45 Allen-Kings 1:05 1/3
Over	Gasolene Cars \$4,000. 50 Stev-Duryea0:3846 5-90 Stearns0:4646 65 Hotchkiss0:5236 45 Acme0:55
1 Chas. H. Lane	ars Only. 20 White
Gasolene Cars, 1 Ward Olney 2 R. L. Lockwood Thomas Forbes 3 Robert Burman Gasolene Cars.	\$851 to \$1,250. 20 Mitchell
1 Charles Fleming 2 J. Ross	14 Maxwell 1:1956 14 Maxwell 2:2236 s, all Types. Babcock 1:24 Babcock 1:2956

Another Climb up Giant's Despair.

The differences between the Wilkes-Barre Automobile Club and Walter White and D. Walter Harper, over the hill climb last year, having been satisfactorily settled, the energetic Diamond City club has announced that it will again hold a hill climbing contest up the now famous Giant's Despair mountain, just outside that city, on Decoration Day, May 30th. The club refused to allow steam cars to compete in the free-for-all event last year and Harper and White both protested to the American Automobile Association and were sustained. The Wilkes-Barre Club has since made a satisfactory settlement and the climb will be repeated this year.

As they did not wish to have the date of their hill climbing contest conflict with similar events in other cities, the promoters of the Cleveland hill climb have postponed their contest from Memorial Day to June IV. The annual meeting of the Ohio State Automobile Association has been set for the same bay as the hill climbing contest.

GARY HEADS MR. SHATTUCK'S CLUB

Other Regular Nominees Elected Without Opposition—Retiring President Showers Boquets on the Organization.

With Judge E. H. Gary as president, the regular ticket submitted to the members of the Automobile Club of America, at their annual meeting on Tuesday last, 14th inst., went through like a dose of oil. Judge Gary's colleague's are: Vice-president, Henry Sanderson; 2nd vice-president, William G. McAdoo; 3d vice-president, Robert Lee Morrell; treasurer, Edgar L. Marston; one governor for one year. Horace Porter: three governors for three years, Waldron Williams, Frederick D. Underwood, William Pierson Hamilton; governors for four years, Cornelius Vanderbilt, Schuyler Skaats Wheeler, Colgate Hoyt. Members of the board of governors who hold, over are John Jacob Astor and George F. Chamberlin, of the Class of 1909, and Dave Hennen Morris, Albert R. Shattuck and Winthrop E. Scarritt, of the Class of 1910.

From the outside standpoint the report of Colgate Hoyt, the retiring president, was of more than usual interest because it not only recommended withdrawal from participation in show promotion but also because it touched on the cause of the withdrawal of the club from the American Automobile Association. Throughout the entire report there is a clearly defined disposition to make the club appear as a national organization, which, of course, it is not. In dealing with the subject Mr. Hoyt says:

"Our club is the only automobile club in America recognized in automobile circles in any foreign country, and it is everywhere regarded as the national club in this country and has binding treaties with every foreign national club of importance."

Althought he club withdrew from the A. A. A. because Mr. Shattuck thought automobilists should pay a registration fee of about \$40 per year and he and Lawyer Niles and a few others believed that a man's right to use the public roads should be made revokable, President Hoyt, or whoever compiled his report, has the sublime and unsalted courage to try to claim some credit for the new bill now pending in the New York legislature. The elimination of the "miles per hour clause" gives him great pleasure.

Among recommendations contained in the report is one for an "international touring car trial, somewhat on the lines of the trial to be held by the Royal Automobile Club of Great Britain." Also that the club should organize a congress of automobile clubs and road commissioners from different states to promote a national automobile law, uniform state legislation, continuous inter-state highways and to conduct

experiments "to determine the best preservatives for road surfaces and the abatement of the dust nuisance."

The report recommends that the club should annually donate a medal, to be awarded to the police officer of New York City "who, in attempting to protect the public's safety, exhibits the greatest bravery and risk to himself."

With a gentle hand, Mr. Hoyt administers a slap to the A. A. A. and an approving pat on the back to the A. C. A. in the paragraph which treats of the Federal bill which "our club" did not endorse as it was "in the opinion of eminent counsel, unconstitutional in its provisions. The subsequent rejection of the bill by the House Committee on the Judiciary on the ground of its unconstitutionality justifies the wisdom of your law committee"—which is largely Niles.

Among the "numerous activities" of the club were the labors of the committee on public safety which distributed to automobilists and to the press more than 200,000 copies of a report urging strict observance of traffic regulations and referring to the use of the horn, acetylene lights, smoky exhausts and speed limits.

The club now has 1,540 members, a net gain of 229 during the past year.

New York Buying New Cars.

Two new automobiles have been added to the equipment of the New York police department. One of these was purchased after bids had been submitted on specifications drawn up by the city's engineering department, the successful car being a Stevens-Duryea. Although the catalog specifications of this make of car are not in accord with the specifications issued by the police department, the manufacturers made the necessary changes which principally were in the composition of the metals used in the axles and crank shaft.

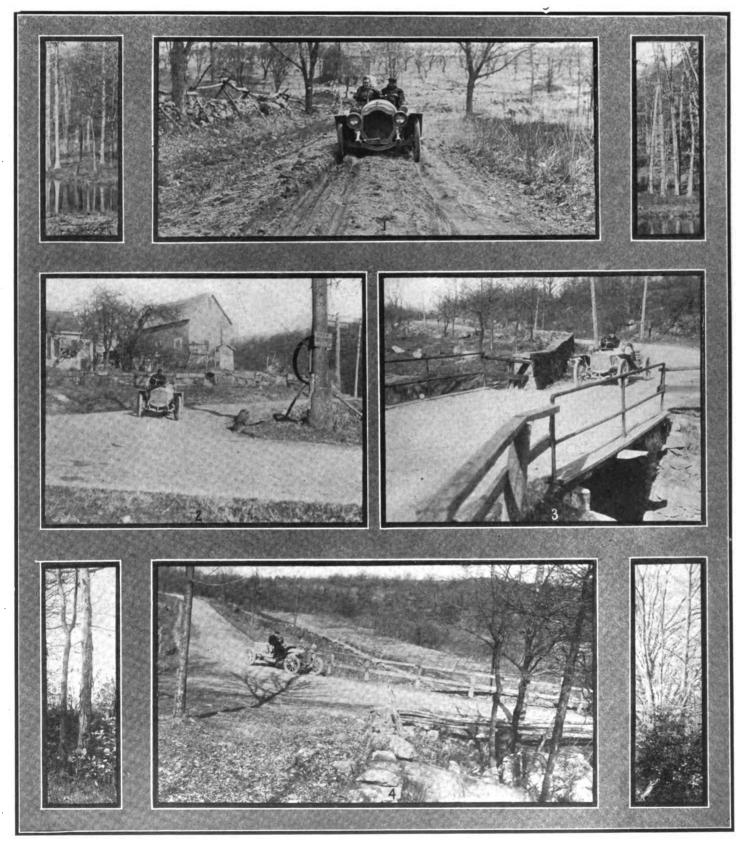
After the Board of Aldermen had refused permission to Commissioner Bingham to purchase two cars in the open market. without advertising for bids, they partly reversed their own decision by again taking up the subject and granting permission for one car to be bought in this way. As the car was for the use of the first deputy commissioner, the selection was left to him and he chose a Berliet.

It is reported that the Department of Docks and Ferries shortly will advertise for a car. The specifications will be the same as those used by the police department.

Two Hills for Chicago's Club.

May 15th will be the date of the Chicago Motor Club's annual hill climb up the Perry and Phillips mounds at Algonquin, Ill. Twelve events in all have been provided, separated into four divisions, including two amateur events and a team competition, in which latter event the three cars making the best average by club for mula will be declared the winner.

SOME OF THE DANGER SPOTS ON THE BRIARCLIFF COURSE.



1-Muddy Road Near Pines Ridge. 2-One of the "Hairpin" Turns. 3--Sharp Turn on to a Country Bridge.
4-Winding Road Down Hill to a Right Angled Turn.

STARTING ORDER AT BRIARCLIFF

Twenty-two Entrants Draw Positions The Men Who Will Flirt with Death on the Corkscrew Course.

Unless God is unusually good to the Automobile Manufacturers' Committee and to the contestants themselves, the story of the race for the Briarcliff trophy, which occurs on Friday of next week, 24th inst., will be one of the saddest stories of the sport ever penned. As the Motor World has stated on previous occasions, the course in Westchester county, New York, which has been selected for the contest, is

10 Murphy, 30 Maja. 11 Poole, 50 Isotta-Fraschini. 12 Roberts, 60 Thomas. 13 Oldfield, 30 Stearns. 14 Bernin, 50 Renault. 15 Robertson, 50 Panhard. 16 Hilliard, 30 Hol-Tan.

17 Campbell, 30 Allen-Kingston. 18 Bloch, 50 Renault.

19 Harding, 50 Isotta-Fraschini. 20 Bergdoll, 50 Benz. 21 Seymour, 50 Simplex. 22 Watson, 50 Simplex.

It has not yet been announced at what interval the cars will start on the morning of the race. In fact, some of the details

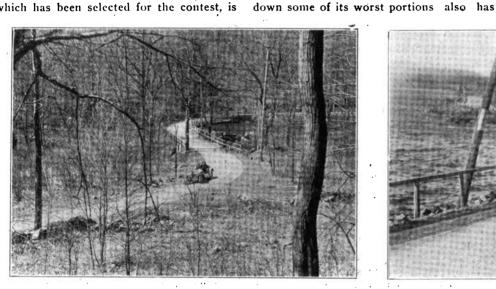
seem to be somewhat clouded. Work on

the grandstand was started only this week

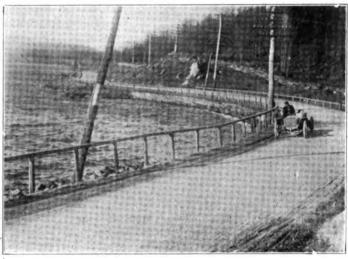
and the task of oiling the course and toning

Although all the drivers entered for the race have not yet "felt" the course in their racing stock cars, preferring to wait until the roads are made at least semi-safe, a number of them have taken chances by daily early morning spins around the corkscrew circuit. The ditching of cars has been almost a daily occurrence. Montague Roberts, Thomas, was one of

the first to damage his car. The accident to Roberts's car occurred on Friday morning last, and fortunately for him and his mechanic neither was injured, but since that time Roberts has been using another car in his practice runs. Roberts attempted to take the sharp curve just below the site of the grandstant at Briarcliff Manor too fast after passing another car, and a skid into



ONE OF THE MANY CORKSCREW TURNS



SERPENTINE ROAD ALONG KENSICO LAKE

as full of tragic invitations as a porcupine's back is full of quills. Indeed, "prepare to meet thy God!" is the warning painted by some religious crank on a boulder, that marks one of the many sharp, right-angled turns which stud the course that is just a little straighter than a corkscrew; and it is a warning wholly appropriate to the forthcoming occasion.

If the plans, so far as they are known at present, are carried out, twenty-two drivers in that many cars will start, beginning at 4:45 a. m. on the 24th inst., for a ten laps' race around the dangerous course. As it measures 30 miles the full distance of the race will be 300 miles.

Positions for the start were drawn by representatives of the contestants on Tuesday of this week and Prossen, who is to drive a Bianchi, secured the right to start first by drawing "No. 1." Cedrino will start second in the Fiat. The official order of start is as follows:

- 1 Prossen, 50 Bianchi.
- 2 Cedrino, 60 Fiat.
 3 Lytle, 50 Apperson.
 4 Strang, 50 Isotta-Fraschini.
 5 Leland, 30 Stearns.
 6 Parker, 60 Fiat.
- 7 Michener, 45 Lozier. 8 Vaughn, 30 Stearns. 9 Mulford, 45 Lozier.

only begun. No announcement has been

made as to how the promoters intend to

police the course, although a rumor is

afloat that several regiments have been "in-

OF BRIARCLIFF COURSE

vited" to keep in order the throng of spectators that probably will flock to Westchester county to witness the contest.

an embankment was the result. Monday, the 13th, proved an unlucky day for Joseph Seymour, who is to drive one of the Simplex cars. Seymour left the narrow road in the Mount Kisco section and crashed into a stone wall. The car was damaged somewhat, but the driver and passengers escaped injury. Daniel Murphy came to grief near the Kensico reservoir Tuesday morning. He also attempted to rush a turn in his Maja car and it turned turtle. Murphy received a bad gash in his leg, but will be able to walk in a day or so. Accidents to touring cars are of such common occurrence as to excite no comment. There is scarcely a mile of absolute straightaway in the entire thirty miles, so it is plain to see that the possibilities for undesirable sensations are immense.

Not any portion of the course can be described as safe, but some of the turns are positively dangerous. There is a bad turn just below the grandstand at Briarcliff and another where the course zigzags around Hawthorn. A few hills are encountered before Valhalla. Probably the best portion of the course is from Valhalla to Armunk, until Mount Kisco is reached. From Mount Kisco to Pines Ridge it is described as "fierce," while the stretch

UNEVEN ENFORCEMENT OF LAW

from Eastview to Valhalla is just as bad. On both these legs the road has been so badly cut up, and abounds in so many ruts, that it will be a gigantic task to make the road half-way safe before the day of the race.

If all the cars that have been nominated start, the race cannot but develop into the longest one of its kind ever held. The fastest time recorded in the trial spins has been 45 minutes for one lap, thirty miles, and the majority of the cars that have been timed have done not much under one hour. In view of this it would seem that the race will run for at least eight or nine hours. As the road is so narrow in places that it is practically impossible to pass another car while going at full speed, the cars that get an early start doubtless will have the best of the odds.

Eleven American and the same number of foreign cars will be represented. The Bianchi, Fiat and Isotta-Fraschini are of Italian origin; the Benz, of German, and the Maja is of Austrian manufacture. The Renault and Panhard are French cars. The American makes represented are the Lozier, Stearns, Thomas, Hol-Tan, Simplex, Apperson and Allen-Kingston. As a contest between fate and skill the Briarcliff trophy race should prove an exciting example. The most skilled drivers in America will flirt with death, such well known cracks as Lytle, Leland, Strang, Oldfield, Michener, Vaughn, Poole, Roberts, Bernin, Robertson, Hilliard, Campbell, Bergdoll and Harding being included in the list. Some of them have families.

Colgate Hoyt has been named as referee and A. R. Pardington associate referee.

Turkey's Aversion Begins to Weaken.

It would appear that Turkey's constitutional aversion to the motor vehicle is in a fair way to be overcome. According to a report from Consul William C. Magelssen, of Bagdad, a commission from Constantinople, headed by Nazim Pasha, which has been investigating economic conditions in Mesopotamia, has recommended the establishment of three automobile routes leading from that city. These will open regular communication with Damascus, Aleppo and Mosul, respectively. The recommendation is now receiving attention, he continues, and it is believed that the plans will be carried out. He states that it is likely that heavy vehicles seating at least six passengers will be required.

Motor Bus Service for City of Mexico.

One, of the first installment of five motor omnibuses, is about to be put into service in the City of Mexico by a local company which has been organized for the purpose. The remainder of the lot will follow in a short time. The machines have been ordered from an English firm which is building the equipment of one of the London companies, and are of the single deck type, seating 24 passengers.

Why the Chauffeur has a Grouch—Compelled to Obey Road Rules that Horse
Drivers Persistently Ignore.

"I don't want to be known as a man with a perpetual grouch," said a professional chauffeur, whose driving mainly is done through the streets of New York City, and its suburbs, "but I've had a grievance for so long that I am beginning to think it may become permanent, unless something is done to remove the cause of it.

"We've all heard so much about 'unjust discrimination' against automobiles and automobile owners that the phrase has become tiresome, but usually the 'discrimination' that is talked about, is in reference to laws and legislation, license fees, speed rules, etc. Yet there is another feature, or may be the same one in slightly different guise that roils me, and that is the one about road rules, or, as we say here, street traffic regulations.

"Consider first the automobilist: If he drives a little faster than the law allows, he gets pinched; if he goes downtown on the uptown side of the street, he is pinched again; if, through accident or design he neglects to obey a policeman's signal, he has either to back up, turn around or get pinched; in other words, he has to be mighty good all the time and obey all the rules, or he is in constant trouble with the authorities. Understand, I am making no complaint about these things; I am entirely willing to obey all the laws made to govern traffic, but I think that the traffic laws should be impartially enforced, and that horse drawn vehicles should be compelled to obey as well as automobiles.

"While horse drawn vehicles are compelled to live up to the regulations that I have quoted, they are permitted absolutely to ignore one rule that, in itself, does not affect the automobilist very much, though the fact that others are permitted to ignore it frequently places the automobilist in a serious predicament; that is the rule which seeks to compel slow moving vehicles to keep to the right.

"Any driver of a motor car can recall numerous occasions when collisions have been narrowly avoided, or perhaps actually did occur, because his only way to pass a load of hay, a moving van or some other heavily loaded, slow moving vehicle, traveling in the same direction, lay in going to the right of it instead of passing it on the left as the regulations provide. There is no earthly reason why these vehicles should not be driven on the right side of the street, and there is absolutely no reason why the police should not compel them to do so, but the cops do not compel it; and that constitutes the discrimination that is causing my grouch.

"Fourth avenue in Brooklyn, is a good illustration of the point I make. Although this street is boulevarded and has a roadway about 25 feet wide on either side of a 10-foot neutral ground, it is not popular with automobilists. The street is asphalted and leads to the macadam roads which go to the Crescent Club's country house, and the U.S. military reservation at Fort Hamilton. Fourth avenue is also the direct road to one of the most beautiful driveways in the world. The 'Shore Road,' and yet the avenue is used very little in the day time by automobilists simply because the police, who are detailed for the purpose, fail to enforce the traffic regulations, with the result that when a motor car does use the streets its course resembles that of a ship without a rudder. No other good roads are near at hand, and the motorist must go a mile or more out of his way to reach the same points, but invariably he prefers to take the longer course, rather than to try to navigate through a street which should be and could easily be made a safe and delightful thoroughfare.

"Some time ago I learned that officers of the Long Island Automobile Club had taken up the matter and tried to have the rules of the road enforced. I spoke to one of the bicycle policemen who are stationed on the avenue, asking him why he didn't arrest the drivers who wouldn't obey the law.

"'Arrest them,' he said, 'We did arrest them—took in 18 in one day and the magistrate discharged every one of them and then called us down for interfering with poor working men, as they expressed it, and letting rich automobilists do as they please; so what's the use of taking them in if the judges will not support us?"

"There's the unjust discrimination. Because a man is a working man, he's poor, and must be let alone; if he rides in an automobile, he's rich, lock him up. And yet this is a country where all men are supposed to be equal!"

Cabbies Make War on Automobiles.

With the influx of Easter visitors to Atlantic City the annual war between cabbies at the railroad stations has begun. Charged with malicious mischief, Herbert Kiger. driver of an uptown hotel automobile, was held last week under \$500 bonds for court. upon complaint of Earl Farr, another hotel automobile driver. According to the stories told Magistrate De Hart the men have been having some argument about their respective places in the line of waiting vehicles on the arrival of a train. Kiger is alleged to have told Farr that he would get even with him. The trouble came to a focus when Farr is said to have deliberately charged into Farr's car with the machine he was driving, resulting in the demolishment of the former's machine. Two women who were in the car were nearly frightened to death. Then followed the arrest of Kiger.

NEW IDEA IN STANDARDIZATION

Special Feature in Mechanism of the P. & S.

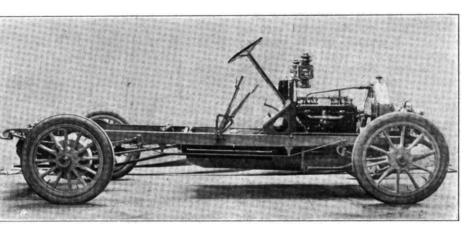
Product—Details of Design and

Construction.

Considerable meaning may be conveyed by no more than two letters on occasion, though ordinarily a good many more are required to convey a definite idea. A case in point is the cryptic "P & S" which is the appellation given to New York City's latest motor car product, marketed by Palmer & Singer. In this instance the significance attached to the letters is that of a sturdy and thoroughly practical machine in which are embodied a sufficient number of original features to give it ample distinction

quarters without lowering the chassis unnecessarily.

The chassis of the Four-Forty model. which for the first time was put on exhibition at the warerooms of the company last week, reveals these characteristics: Motor, vertical, with cylinders cast in pairs and measuring 5 by 5 inches bore and stroke; with valves mounted in pockets on the right side, thus grouping all auxiliaries and possible adjustments, except the magneto, on the drivers' side and necessitating the lifting of only one side of the bonnet when making inspection and light repairs; double ignition, with two sets of plugs and Bosch magneto; engine control by levers on steering column and accellerator pedal. Transmmission is effected by means of a four-speed, selective gearset affording direct connection on the



CHASSIS OF P. & S. "FOUR-FORTY"

above other products measuring up to it either in power or price.

The P & S line is composed of five distinct vehicles, mounted on four different chassis, making a line complete in itself. Though widely varying in purpose and size, an ingenious application of the designer's art has made the mechanism practically interchangeable back of the dash boards, so that transmission and running ge: r parts for the whole line may be stocked without complication, and replacements made with a minimum of inconvenience, both to owner and repairman.

The models are known respectively as the "Four-Forty," "Town and Country car," "Six-Sixty Touring Runabout," "Six-Fifty Runabout," and "Skimabout." Except for the engines, and other items relating to wheel base, location of power plant, and arrangement in other respects, the cars are much alike, as already indicated, so that a study of one involves in a general way a study of the others. One point of difference, however, applying both to the Town and Country model and to the Skimabout, is in the radiator and bonnet construction which in these two instances follows the C. G. V. pattern. The Town and Country car, which is a neat and comely landaulet, also is marked by a double-drop frame, which provides easy access to the passenger third speed, and double-jointed shaft to the live rear axle. The master clutch is enclosed in the gear case and is of the popular multiple disc pattern, employing 49 members and affording an unusually large amount of working area. The wheel base is 126 inches, the tires 36 by 4 by 4½ inches.

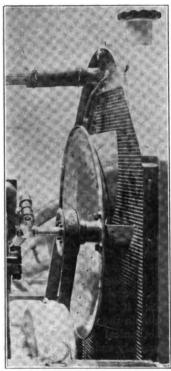
Of the features which are worthy of special attention may be mentioned among others the springs, which are all of semi-elliptical pattern, of 34 and 52 inches length, front and rear, respectively, and having 13 and 14 leaves respectively. All but the upper leaf in each case are provided with "kitten ears," to prevent disalignment, the upper leaves being of short length and destined to absorb only the rebound. The rear shackles of the front springs are also provided with non-reversing clips which prevent them from turning under in an embarrassing fashion peculiar to some designs.

The steering connections attract attention since the usual ball and socket joints are replaced with clevises and through-pins, the universal motion of the drag link being secured by means of a Hooks joint. The gear itself is of the worm and segment type and with the liberal rake of the steering column comes well in front of the dash.

The brakes are of the double-expanding type balanced as to application of the pull

and mounted in mud-proof drums on the rear wheels. In addition to the brakes, a hill-pawl attachment is mounted on the driving shaft just back of the gear box.

The power plant is carried on a subframe running up to the radiator but not including the usual cradle for supporting that member. Instead, the radiator is carried by an original form of ball and socket trunion mounting providing for universal movement due to the weaving of the frame without in the least straining the casing. An important and no less striking feature of the cooling system is the fan which is belted from the auxilliary two-to-one shaft



CHN RIFUGAL FAN ON P & S. PADIATOR

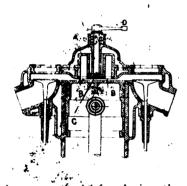
on the left side of the motor, and which, instead of being of the usual direct suction type. is centrifugal in pattern. Its framework is a solid alluminum disc of convex form upon the face of which the blades are mounted. The effect is to drive the dust and dirt which are inducted through the radiator to the outside of the bonnet instead of impinging the gritty particles against the motor itself. A second fan mounted in the fly wheel takes care of the discharge from the rear end of the bonnet.

Though of heavy construction and arched at the back to give ample clearance—over the rear axle, the frame is trussed through the waist to give added stiffness. The rear axle, which is of cast steel, except for the aluminum housing, is stayed in position by means of the usual torque rod and two radius rods which are joined to the frame on the same transverse axis as the forward universal joint of the drive shaft. The front axle is of I-beam section, of well thought out design and of very evident strength and stability—a quality which is manifest in all the details of the mechanism.

CONVERTIBLE GAS AND AIR MOTOR

Its Feature of Variable Compression to
Aid in Starting and Braking—
Simplicity of the System.

Considerable attention is being devoted to the use of compressed air for starting purposes on motors of medium and large size, at the present time, and not a few ingenious arrangements are coming to light accordingly. Typical of these, is a recent foreign device for improving the action of the motor when working on compressed air, which is worthy of especial notice as appearing under the well known name of Berliet. In a word, it is nothing more nor



less than a method of reducing the clearance volume of the cylinder for the time being thus raising the compression, when the motor is being used as a brake, and reducing the volume of air which must be admitted when it is working as a motor, in order to obtain the desired impulse.

The mechanical construction employed is comparatively simple. It is shown in the accompanying illustration, which is the outline of a T-head cylinder of the ordinary type except for the special arrangement in question. This comprises the use of the compression chamber, A, which consists of a separate casting, set into the cylinder head and carrying at its base the seating of the rotating valve, C, which has a series of ports, B-B, which may be made to register with corresponding ports in the lower side of the port, A, or to close the openings, according to the adjustment of the lever, D, above, through which the system is actuated. The valve is held against its seat and rendered air tight by means of a spring which is suitably housed in the upper part of the jacket casting, the latter also furnishing a guide for the valve stem.

When the valve is disposed as shown in the illustration, the ports leading into the compression chamber are open, so that the cylinder affords the usual amount of compression space for the gas, when the engine is run under its own power in the usual way. When the valve in question is closed, however, there remains in the center of the cylinder, only sufficient clearance to allow for the stopping of the piston without its knocking the lower face of the valve, while even with the volume over the valves and in their pockets, required to give proper space to open them, the actual clearance volume is comparatively slight.

In this way, when the motor is being used as a brake, a very high compression pressure may be secured by delaying the opening of the inlet valves until the piston has ended its stroke, while the degree of retardation obtained in this way may be regulated to the required degree, by altering the timing of the valves in any appropriate fashion. The advantage gained in a similar way when the motor is to be run on the simple expansion of compressed air, is of relatively less importance, since that use is limited and of less significance than that involved in retarding the movement of the machine as a whole.

Results of Benzol-Gasolene Tests.

Benzol, as a possible substitute for gasolene as a motor fuel has never been exploited in this country, though numerous tests have been made with it in England. A series of experiments which are now being conducted by Joseph Tracy, the New York engineer, so far as they have been carried out, however, tend to bear out the results of the foreign investigation. These indicate briefly, that if available in sufficient quantities, it would appear to be an efficient and economical source of energy for the motorist's use.

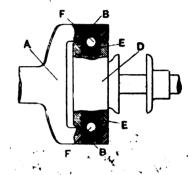
During the past week a series of comparative horsepower tests have been made on the dynamometer at the garage of the Automobile Club of America, gasolene and benzol being used alternately. These have shown a decided gain in favor of the newer fuel. The tests in which the only difference was in the fuel employed, revealed a slight gain in draw bar pull and so in horsepower, in favor of the benzol. By making special adjustments of the carburetter, however, the gain was materially increased. The superlative test-that indicated by the gradometer readings, which take into account the weight of the car as well as the drawbar pull, showed that with gasolene, the car-a Simplex runabout-was capable of climbing an 11.9 per cent. grade. With benzol the indicated grade was 12.1 With the carburetter adjusted especially for the benzol, the maximum theoretical gradient was increased to 12.2 per cent. The draw bar pull in the latter instance was 398 pounds, as against 383 pounds with gasolene.

In addition to an exhaustive series of laboratory trials which have been carried out in England, numerous road trials have been employed to good advantage in demonstrating the economy of the substitute. The most remarkable of these was a 300-mile run which was made by a touring car carrying 4 passengers. The averages at the end of the test, showed a consumption of 7½ gallons per day of 150 miles running, which works out at 20 miles per gallon.

STEERING KNUCKLE SIMPLIFIED

New Principle Applied in a Recent Foreign
Design—Adapted to the Lighter
Types of Vehicle.

It would be supposed that the design of steering knuckles had been reduced to practically its lowest terms, so long have the two principal types of Elliott and Lemoine knuckle been in use without material alteration. A modification of the former type has recently made its appearance in France, however, which plainly discountenances any such idea. It should be noted, however, that the modification in question appears to be applicable only to the very lightest types of



cars, and for work which is not subject to unusually heavy road stresses.

The design, which has been applied to the Gregoire cars—which are tunabouts of the type at present so popular on the Continent—is shown in the accompanying illustration. The principle is merely that of replacing the ordinary through pivot pin by a couple of large balls, set half and half in suitable bearings in the yoke and knuckle, above and below.

The method of construction is plainly apparent from the illustration. The yoke and knuckle ends, are drilled out to take the bearing sockets, B E, which, in turn, are shaped to form the cup retainers for the large diameter balls, F F. The cups, B B, are screwed into place, and after being adjusted to give the proper tension in the bearing, are securely locked in place. The balls perform the double function of bearings and pivots, and it would appear that the relative resistance of the assembly should be comparatively low.

As compared with the more common method of securing the assemblage by means of a pivot pin together with ball bearings of the full type, the system in question possesses the indubitable advantages of simplicity, low cost of manufacture, and natural interchangability. At the same time, the very evident peril resulting from a possible springing of the yoke sufficient to release the balls, and the danger which would arise from the fracture of one of the balls, are points against it, which only a considerable trial in actual service can convincingly overcome.

WHAT THE CLUBS ARE DOING

Old Ones Electing Officers and New Ones
Organizing—Baltimore Develops
Novel Interclub Idea.

So efficient were their services last year that the old officers were unanimously reelected at the annual meeting of the Automobile Club of Hartford, Conn. The president's report showed that during the year the club had increased from 50 to more than 200 members. The officers reelected were: President, W. F. Fuller; vice-president, C. H. Gillette; secretary, G. K. Dustin; treasurer, C. DeL. Alton, Jr. Chairmen of the various committees were appointed as follows: Membership, C. E. Whiting; contests, Hiram Percy Maxim; rights and privileges, Colonel George Pope; good roads, C. H. Veeder, and sign posts, C. D. Rice.

At its annual meeting last week, held in Lancaster, the Pennsylvania Motor Federation admitted the newly formed clubs of Norristown and Williamsport, making a total of 20 clubs and a total membership of 2,050. Officers were elected as follows: President, Robert P. Hooper, Philadelphia; vice-president, Dr. S. P. Davis, Lancaster; second vice-president, Peter A. Meixel, Wilkes-Barre; secretary-treasurer, Paul C: Wilff, Pittsburg.

Owners in Fall River, Mass, have formed the Fall River Automobile Club. The following officers were elected at the organization meeting: President, Dr. George L. Richards; vice-president, Earl P. Charlton; secretary, Arthur S. Phillips; treasurer, Albert A. Harrison; directors, the officers, H. C. Talbot, George D. Flynn, John R. Hilton, Edmond Cote, Edward B. Remington, Edward J. Jennings, and Robert Marshall.

So many members of the Automobile Club of Maryland enjoy a quiet game of whist when they are not at the steering wheel that the Baltimore Whist Club and the automobile organization have effected an arrangement whereby the members of each organization become members of the other. Each club retains its identity, the arrangement being one merely for mutual social enjoyment.

Watsonville, Cal., now has an automobile club, the Pajaro Valley Automobile Club having been formed last week with these officers: President, Dr. P. K. Watters; vice-president, James Sheehy; treasurer, W. D. Gulick; secretary, W. S. Foltz; directors, R. J. Cox, Carl Christenson, W. J. Russell, C. H. Baker, and P. W. Morse.

The Virginia State Automobile Association was organized last week with the Tidewater Automobile Club of Norfolk and the Automobile Association of Richmond as members. Officers chosen were: President, Joseph E. Willard; vice-president, Abbott

Morris; secretary-treasurer, O. M. Alfriend.

The Fairbault Automobile Club has been formed in the Minnesota city of that name with these officers: President, A. Blodgett, Jr.; vice-president, K. D. Chase; secretary-treasurer, W. M. Nutting; governors. Willard McM. Reid, John E. Dobbin, Walter Scott and Dr. C. W. Wilkowske.

The following officers were elected at the annual meeting of the St. Paul (Minn.) Automobile Club: President, Reuben Warner; vice-president, R. M. Neeley; secretary, H. S. Johnson; treasurer, A. Washburn; directors, Oliver Crosby and W. Hurd.

The Arkansas Valley Automobile Club, Pueblo, Col., has elected the following officers for the ensuing club year: President, Lee Graham; secretary-treasurer, Homer

CETTING COUNTRY HOUSE IN ORDER

Long Island Automobile Club's Summer Rendezvous "Swept by Ocean Breezes"

—Its Location and Attractions.

Preparations for opening the country house of the Long Island Automobile Club are advancing rapidly, and there is reported a large volume of correspondence promising an increase in membership. The house, which is to be held under lease, is on the T. B. Ackerson company's property, known as "Brightwaters," in Bay Shore, Long Island, 39 miles from the present city club house of the L. I. A. C. The house



COUNTRY HOUSE OF LONG ISLAND AUTOMOBILE CLUB

E. Brayton; directors, George E. King, Homer E. Brayton, Lee Graham, L. C. Walker and Dr. Crum Epler.

The Roanoke Automobile Club has been formed at Roanoke, Va. It will become a member of the State automobile association which has just been formed. Officers will be elected by the directors, who are as follows: J. H. Marstellar, W. E. Michael, C. M. Armes, J. C. Cassell, Dr. J. D. Kirk, E. M. Funkhouser, Dr. Norris, Judge Waller R. Staples and A. B. Hammond.

With its jurisdiction extending over Wexford, Osceola and Missaukee counties in Michigan the Cadillac Automobile Club has been formed with these officers: President, George Westover; vice-president, Charles E. Haynes; treasurer, Wynter Massey; secretary, Fred A. Anderson.

The New Albany (Ky.) Automobile Club has organized with the following officers: President, John S. McDonald; vice-president, Dr. Charles P. Cook; secretary, Dr. R. S. Rutherford.

The Kenton Automobile Club has been organized at Kenton, Ohio, with twenty charter members. It will become a member of the State association.

sets back about 300 feet from the Merrick or South Country road. It is 3,900 feet from Great South Bay, where an excellent beach suited for bathing is located. The grounds are large and laid out with shrubbery, shade trees, etc. The house has four large rooms and a spacious hall on the ground floor, besides pantry, kitchen, etc. On the second floor are five large rooms and bath. On the third floor are six rooms with bath and shower. There are spacious piazzas on three sides of the structure.

The house is to be conducted as a pleasant rendezvous for members and their families. A competent manager will be in charge; the table will be of the best and a limited number of sleeping rooms will be available for members.

About twenty-five automobile owners of Willimantic, Conn., met in the Board of Trade Rooms on the 8th inst., and organized the Willimantic Automobile Club. The officers elected are: President, Dr. John Weldon; vice-president, J. B. Fullerton; secretary, L. B. Lincoln; treasurer, E. F. Writmore. The board of governors consists of these officers, with D. W. C. Hill, E. P. Chesbro and T. F. Howie.

G & J TIRE LOSES ON APPEAL.

(Continued from Page 70)

Claim 3 shows that Golding used a sheath and an inner inflatable tube.

This patent was purchased by the appellant soon after it was issued, and owned by it down to the time it expired.

The first Jeffery patent in suit, No. 454,115, is for an improvement in wheel tires, and "is designed to provide improved means for protecting a rubber wheel tire, and is particularly designed and adopted for an inflation tire—that is to say, a tire having a core composed of an elastically expansible tube. which is inflated by air or gas and distended thereby to some extent, the air or gas being under such tension that but for a restraining or enclosing sheath such core would be liable to burst."

The inflated core or elasticany expansible tube, encased in a restraining sheath of the Dunlop patent is the same in the Jeffery patent. The improvement of the latter, among other things, over the Dunlop extends to the device for attaching the tire to the rim of the wheel. This, in the description, we find is a "rim" provided with hooked edges. "The hooks may be turned either inward or outward. The tire sheath is provided with corespondingly hooked edges. corespondingly hooked edges. . . . Ordinarily the entire sheath will be made of canvas or similar woven fabric comparatively inelastic, and in that event the hooked edges will be stiffened with caoutchouc or India rubber, or they may be vulcanized if the sheath is made of suitable substance to endure the temperature. On some accounts the hooks on the rim are preferably turned outward, chiefly because the center of the body or inflatable core is thereby rendered free from the irregularity which the hooks form when they are turned inward. On the other hand, the liability of the sheath hooks to be pulled out from the rim hooks hy the expansive tendency of the core when inflated is somewhat less when the hooks are turned inward; but practically the two methods are about equally desirable." In either case, it should be observed that the hook is open toward the axis, and it is preferably approximately in the direction of a tangent to the inflatable core, so that the expansive tendency of the core will tend to draw the hooks into close engagement.

This improvement in the attachable device, which the patentee has designated "hooked edges," both on the rim and on the tire, is variously stated in claims 1, 2, 3, 4, 5 and 6, which claims the defendant is charged with infringing. They are as follows:

ant is charged with intringing. They are as follows:

1. "In combination with the rim having recesses open toward the axis of the wheel, the tire-sheath having its edges reversed and engaged in such recesses, and the elastic exnansible core between the rim and sheath, substantially as set forth.

2. In combination with the rim having hooked lateral edges, the tire-sheath transversely flexible and having hooked edges which detachably engage the hooked edges of the rim, substantially as set forth.

3. In combination with the flexible tire-sheath having rigid hooked edges, the rim having hooked edges to engage those of the sheath, substantially as set forth.

4. In combination with an inflatable core, the rim in which such core is seated, having its edges

edges to engage those of the sheath, substantially as set forth.

4. In combination with an inflatable core, the rim in which such core is seated, having its edges reversed to form hooked flanges approximately tangential to the core, and the flexible sheath for such core, having its edges encaged in such hooked flanges substantially as set forth.

5. In combination with the rim having hooked lateral edges, the flexible sheath and rigid strins about which the lateral edges of the sheath are wrapped inserted with the enwrapping-sheath edges within the hooks at the edges of the rim, substantially as set forth.

6. In combination with the rim having hooked lateral edges, the flexible sheath and rigid strins about which the lateral edges of the sheath are wrapped, such strips being folded with the enwrapping sheath to form rigid hooks at the edges of such sheath, such hooks being engaged with the hooks at the edges of the rim, substantially as set forth."

It will be seen that the attachable device in this

·It will be seen that the attachable device in this patent is the "hooked connection" of the sheath and tire edges. The patentee says: "the rim is provided with hooked edges," and, as said by the court below, these hooks on the rim are "doubled back U shaped, so as to form recesses and permit engagement in such recesses of corresponding hook points on the hooks of the sheath." This hook is open toward the axis and is "preferably approximately in the direction of a tangent to the inflatable core

so that the expansible tendency of the core will tend to draw the hooks into close engagement.'

The complainant never manufactured tires with the attachable device described in its patent No. 454,115. It was found to be, to say the least, an objectionable means of attachment, and no tires were manufactured as therein described, but the com-plainant modified its form of attachment by changing the device from a hook, with its opening toward the axis, to a projection of the rim more nearly parallel to the flat surface of the rim, and changed the angle of the hook on the tire more nearly to that of a flange to correspond with the tire. is the form of the appellee's device, and if the hook shaped attachment described and claimed in appellant's patent No. 454,115 includes the form appellant has used down to the present time, then the appellee has infringed, because the latter is using the same kind of attachable device used by appellant, but the appellee claims both are using the device described in the Golding patent, which has expired and was public property before appellee began to use it.

When Jeffery patented his hooked device set forth in No. 454,115, the field had been well covered, and if he had made his claim sufficiently broad to include "an extension of a rim partly or nearly parallel with the flat portion of the wheel with the flange on the tire to correspond, such as both parties here are using, he would have invaded the domain pre-empted by the Golding patent, of which the "edges of the rim are bent round and brought a short distance toward each other and nearly parallel to the flat surface of the rim, thus forming an inner recess . for holding the project-The tire is made to fit the rim rather tight . . . and the flanges spring into the recesses." So that the Jefmade to fit the rim rather tight and the fery patent can only be sustained by a construction restricting it within the narrow limits of the hooked device which "opens toward the axis," and cannot be extended to a flange "nearly parallel to the flat surface of the rim," and so construed, it is not infringed. It will, therefore, be unnecessary to consider the question of the patentability of Jeffery's improvement.

The conclusion of the court below that the second patent, No. 558,956, was not infringed, we also think is correct, and we cannot do better than to quote the language there used.

think is correct, and we cannot do better than to quote the language there used.

"The second patent is No. 558,956, issued April 29, 1896, for a wheel tire, claims five and ten of which are alleged to be infringed. Respondent defends on the ground of non-intringement. We are of the opinion the defense is sustained. The subject matter of this patent, its late date in the art, and the close differentiations required to obtain the narrowly limited claims in question indicate the patent was restricted to a comparatively narrow field of improvement. The specification states: This invention relates to tires having inflatable cores; and it consists in the character and construction of the inclosing sheath and the mode of securing the same to the rim. The character and construction of the proposed sheath are specifically shown. No novelty was suggested in the rim. Its construction for the broader type of the device is: The rim is a hollow rim made in familiar manner from tubing having the outer side transversely concave to form a seat for the tire. A special form is suggested: For the purpose of adapting it to receive my improved tire the rim is preferably formed with the peripheral channels A-1 A-1 in the outer or concave wall: but these are not essential to my invention considered in its broadest phase. Their use, when present, will appear from the further description. The lateral portions of the sheath the outente made of folded canvas or other web, ioined at the folded edges to thread or rubber of sufficient thickness to stand wear and 'sufficient elastic flexibility to adapt it to vield with the core, and having also tensile elasticity. So that the sheath which comprised it as the middle section is transversely extensible to a slight degree. The purpose of this extensibility was to adapt the sheath for use with either an inflatable or non-extensible core. At the outer end of the folded canvas, hooks or buttons were placed and in the rim at corresponding distances were put engaging eyelet holes or buttons were pla

edge, and as compares with familiar advantage that the fastening need not even be relaxed or slackened anywhere except at a point where it is desired to completely detach in order to get assette to the core.'

' make the fastening still more secure the patentee suggested an additional element, which it will be noted forms an element in the claims here in controversy. It is thus described: 'It is not a necessity that the lateral pieces C,—that is, the canvas of web sides—terminate at their lines of reinforcement or attachment to the rim, and, on the contrary, one or both of them might be extended farther under the inflatable core, so as to rest between said core and the rim and form a lining for the seat of the core in the rim; and such extension adapts the sheath to be held more firmly in its place by the inflation of the core, and such inflation, holding the inwardly extended edge of the sheath firmly seated between the core and the rim, keeps the beads formed by the core c'—an alternative construction of strengthening cord placed in the folded edges of the web—'in the grooves or channels A-1 of the rim and makes them assist materially in holding the sheath from spreading when the core is inflated.'

The limited side type is described in claim two, which reads as follows: 'The rim and an inflatable core combined with an envelope or sheath for the core parted under the core and fastened to the rim at two peripheral lines, one on each side of the place of parting, and detachable from the rim at one of the said lines of fastening; said sheath having its lateral portions flexible, but not laterally extensible, and its middle portion, including the thread, elastically extensible; substantially as set forth. And the extended side in claim five, which is for: 'The rim and an inflatable core combined with an envelope comprising a thread of cushioning substance and lateral portions composed of textile fabric which are joined to the rim at two peripheral lines, and extending inward operates on said inwardly-extending fa

In the respondent's device, however, the sheath ends with its two peripheral side connections with the rim. No theory or ingenious contention can change that fact, and fact, not theory, is the test of infringement. Accordingly we hold respondent does not infringe."

The decree is affirmed with costs. Filed, April 1, 1908.

Lubricating After the Winter's Lay-up.

When putting an automobile in service after the winter's "lay up," care must be taken to thoroughly drain the crank case of all the old lubricant. It is well to supplement the draining by the introduction of a liberal amount of kerosene; then run the engine for a minute or two so that the scouring propensities of the kerosene may have the opportunity of acting on all the recesses in the crank case, after which it should be withdrawn and fresh lubricating oil supplied.

The front and rear wheel hubs and axles should be carefully cleaned and repacked with new grease and the steering mechanism treated in the same way. All grease cups should be taken off and cleaned, the verdigris that will be found in these should be cleaned out and new grease substituted for that which has been left in over winter. Gasolene which has remained in the tank where air could reach it should be drained out as it will have deteriorated: it can be used for washing, but will not give good service as a fuel even if mixed with a fresh supply. Finally, the mechanical oiler should be dissected and thoroughly cleaned before using.

LIGHT ON THE AUTOMOBILE BILL

Terry Answers Some "Whys" Concerning Pending New York Legislation—His Opinion of Proposed New Law.

It was not in exchange for practically unlimited speed that the New York State Automobile Association agreed to the clausein the new automobile bill which provides that the name of convicted offenders should be "posted" in every county of the State. When Charles Thaddeus Terry, the counsel of the association was asked why this clause was inserted he replied:

"It was a necessary concession to some of the legislators who demanded that the bill should provide for imprisonment for the first offense. While this contention was manifestly unfair and would act as an injustice to a man who ordinarily obeyed the speed rules, these legislators maintained that a magistrate had no way of knowing whether the prisoner was a 'first offender' or a twenty-first. When it was shown to them that it was practical and possible for the magistrates throughout the State to have absolute knowledge of all offenders who were brought before them, they readily agreed to waive the imprisonment clause if the provision was inserted for furnishing the police records of all drivers. In my opinion the concession on both sides was for the best interests of the automobilists."

Mr. Terry was then asked what was meant by "reckless driving," for which a penalty is provided, though the bill contains no speed limitations.

"Reckless driving means reckless driving," he responded. "The idea is to do away with the absurdity of the existing law which permits of the same rate of speed in a congested business street that may be maintained on a suburban highway. There are places where, under certain conditions, it would be reckless to exceed a speed of five or six miles an hour, and again one could travel at the rate of 30 miles with perfect safety."

"Is it constitutional to require a man to take out a license to earn his living by manual labor?" asked the interviewer, who remarked the increased registration fee for chauffeurs.

"That involves a point which only the courts can decide," was the reply. "There is a question as to whether the chauffeur is licensed or whether he received a franchise to operate a vehicle on the public highways."

"But in what respect does a chauffeur differ from a coachman?" persisted the interviewer.

"Not in any way; and that question brings up the point that I always have made—that automobile bills constitute class legislation and discrimination that is unjust and illegal. But people are a good deal like horses in regard to automobiles. They must be educated to their use. The automobile bill still is a new thing, and as such it is a subject for general discussion and for legislation. This is not as true of the cities as it is of the country districts, but the rural residents demand certain things of their legislative representatives and these demands must be complied with. I think that the present bill is distinctly more favorable to the automobile interests than is the existing law. When another bill is drawn up it will be more favorable than its predecessor and so it will go until the automobile will become a vehicle in common use and then no legislation discriminating against it will be demanded and it will enjoy the same rights and privileges as are now accorded to horse drawn vehicles."

"Supposing a chauffeur's organization decided to test the constitutionality of the act requiring them to pay for a license or for registration, what do you think would result?"

"I believe it would be a most unwise step. The present amount of the registration fee is nominal and works no hardship on anyone. The question is not now one that is attracting much attention, but a little agitation of it would make it a live issue, with the very probable result that some examination or test would have to be undergone before a certificate would be granted. It is far better not to take up that subject. It will work out satisfactorily in the end.

"There are some features of the bill," said Mr. Terry, in conclusion, "which could be improved, but it is unwise to attempt that at this time. If you begin to alter the bill the legislators simply will throw up their hands in disgust or else will take an active part in the reconstruction; for that reason it is best to let it go as it is, and next year. If occasion demands it, certain alterations can be made in the subdivisions, but, I repeat, the bill as a whole is a decided in provement on the existing law."

Mexico's Annual Cup Race Postponed.

Mexico's annual Jalisco cup race will not take place on April 20th as was planned. At the present time the roads around Guadalajara are not in good condition for racing and the entries came in slower than was expected. Accordingly the race has been postponed until November 5th, when it is planned to considerably increase the scope of the meet.

Plans Decoration Day Hill Climb.

As the hill climbing contest last year was such a success the Cleveland Automobile Club has decided to hold the climb again on May 30th next. The plan followed last year of classifying the cars according to piston displacement will again be used, and there also will be a special final event.

RUNNING ON BLIND SCHEDULE

Quaker City "Roadibility Run" a "Guessability Game"—Johnson the Best Guesser Among 31 Contestants.

Calculating his speed within one-third of a second of the time in his sealed orders, F. M. Johnson, driving a Winton car, was declared the winner of the first annual "roadibility run" of the Quaker City Motor Club from Philadelphia to Cape May, on Saturday last, 11th inst. The distance was 92 miles.

Although it was styled a roadibility run the contest was more of a "guessability" game, as none of the thirty-one contestants knew what they were to do when they started. The game was to see which driver was the best guesser. When the cars left the Walton, in Philadelphia, the drivers were handed sealed envelopes containing the required time in cipher. When all the cars arrived in Cape May the envelopes were opened and the driver who had made the run in the period of time nearest corresponding to that predetermined and kept secret by the contest committee, was awarded the trophy. All the that no sealed times called for a rate greater than the legal limit of twenty miles an hour.

When the envelopes were opened at Cape May, Johnson was found to have guessed nearest to the time marked in his envelope. He covered the distance in 5 hours 54 minutes 1834 seconds. The time given his car in which to make the run was 5:54:18. Second prize was given Dr. E. M. Lengle, Matheson, who finished 25 seconds ahead of his sealed schedule time. A. E. Maltby, Winton, was a close third, 26 seconds too soon. These figures all are so well within the speed limit that the performance, which would have been a remarkable one-in the line of guessing-had only one competitor made such an excellent hit, borders somewhat on the wonderful.

The route was from Philadelphia to Camden, Egg Harbor, May's Landing, Esterville, Tuckahoe, Seaville, Cape May Court House and Cape May. The drivers who played the game were:

L. E. French, Pullman; Max La Roche, Pullman; E. C. Benson, Apperson; Charles J. Swain, Apperson; A. M. Benson, Apperson; P. D. Folwell, Packard; J. A. Hudson, Marmon; E. M. Lengle, Matheson; B. F. Pierce, Ford; F.M Johnson, Winton; J. Shelton, National; R. W. Steele, Apperson; W. M. Swain, Apperson; A. E. Maltby, Winton; H. N. Wilkins, Thomas; R. E. Ross, Elmore; O. W. Hoffman, Stearns; T. W. Berger, Oldsmobile; Joe Kier, Thomas; M. B. Reeves, Apperson; F. Geiger, Maxwell; L. C. Simpson, White; J. H. Schenck, Winton; J. N. Wilkins, Ford, and Frank Yerger, Studebaker.

BAY STATE "SQUFEZER" STRANGLED

Adverse Committee Report on Proposed
Additional Taxation of Automobiles—
Important Features in New Bills.

Something has happened in the Commonwealth of Massachusetts, since the last issue of the Motor World, that has switched off the track the "squeezer" bill that was to carry out Governor Guild's proposal to get more money from the automobilists. Indications of a week ago pointed to the strong probability of a measure being reported under which new taxation would be imposed on automobiles, with a graduation in the size of the fees to be exacted for registration. The Committee on Roads and Bridges, however, has given more mature consideration to the question with the result that it reported "no legislation necesary" on that portion of the Governor's inaugural address wherein the suggestion for increased taxation was made.

On the other hand the committee has vielded to the demand of the anti-automobile element on the island of Nantucket and has reported a bill that is designed to give to the selectmen of the town of Nantucket the power to exclude automobiles from the island between June 15 and September 15 of each year. In order to get an idea of the actual situation there the members of the committee visited the island early during the current month. The trip of 30 miles across the turbulent waters of Nantucket Sound was too much for the stomachs of the solons, and it is possible that one result of their seasickness was that they couldn't see why automobilists should want to go to Nantucket anyway.

The most important bill reported by the committee is one incorporating many of the suggestions of the Highway Commission and the Safe Roads Automobile Association. In this bill there appears a new section designed to bring non-resident automobilists more closely under the Massachusetts laws. The present law permits non-residents, whose cars are properly registered in their home States, to use them in Massachusetts for a period of seven days without a Massachusetts registration. As a matter of fact, it is said that many nonresidents have used their cars there all summer, going out of the State at intervals so as seemingly to comply with the law. If the drivers or owners of these cars happen to be convicted of an offense against the automobile laws of Massachusetts they are brought into court and fined. That is as far as the law can go, for having no Masaschusetts registration they cannot be penalized by the Highway Commission.

The new bill as reported adds to the section of the law which permits non-residents to use their cars in the State for seven days the following sentence: "But if any such non-

resident be convicted of violating any provision of the laws of this Commonwealth relating to automobiles and motorcycles and to the operators thereof, by any court or trial justice, whether or not he appeals, he shall thereafter be subject to and required to comply with all the provisions of this act relating to registration of motor vehicles and the licensing of operators thereof." In other words, if a driver of a non-resident automobile is convicted in a police or district court of overspeeding he must forthwith take out a Massachusetts license and registration.

Under advice from the Attorney General's office the committee changed the provision of the bill relating to running away after an accident. In the original draft this clause read: "or goes away without stopping and making himself known after causing any accident to any person, or any serious accident to any property, unless he can prove a justifiable excuse." The clause now reads: "or who without a reasonable excuse therefor goes away without stopping and making himself known after causing injury to any person or property." The change is obviously to the advantage of the automobilist, for he can prove a "reasonable" excuse, perhaps easier than he can a "justifiable" excuse. The penalty for running away is fine or imprisonment and the loss of license.

A new section of the bill provides that the Highway Commission may issue certificates and licenses without charge to members of the foreign diplomatic corps; may charge an additional fee of two dollars for examination of an applicant for a license, and may charge fifty cents each for duplicates of certificates or licenses. The bill also appropriates \$3,000 to help defray the expenses of the inspectors who are to be appointed by the Commission to investigate accidents.

Testing Chicago's Wheel Tax Ordinance.

Chicago's wheel tax ordinance, which was passed by the city council February 3, is now ready to be put to the test of constitutionality in the Supreme Court. Judge Carpenter of the Circuit Court, handed down a decision on Friday of last week, holding that automobiles and vehicles used for recreation and purposes of pleasure may not be taxed under the ordinance. The finding was on a bill filed by Charles C. Harder and his son Charles C. Harder, Jr., asking an injunction to prevent the collection of the tax on pleasure vehicles belonging to them. Several weeks ago the Harder Fire Proof Warehouse Van Co. filed an injunction petition to prevent the collection of the tax on vehicles used for mercantile purposes. To this the city filed a demurrer which was sustained, the complainant taking an appeal on the ground of the alleged unconstitutionality of the statute and ordinance providing for the tax. The more recent action was intended to broaden the scope of the original motion.

FEES DETERMINED BY HORSEPOWER

Rhode Island's New Automobile Bill Provides for Graded Taxation—Also Limits Speed to Twenty Miles.

As the result of a number of meetings of the judiciary committee of the Rhode Island Assembly, a new automobile bill has been framed for submission to the House. In a general way it conforms more closely to the measure introduced by Representative Phillips of Coventry than to the bill drawn in the interest of the Rhode Island Automobile Club, or the one introduced by Representative Olney Arnold, of Providence. The Phillips bill provided for placing the control of automobiles in the hands of the board of public roads instead of the Secretary of State, as at present. This provision was opposed by Col. Frank W. Tillinghast, of the Automobile club's special legal committee, at a hearing given in February and reported in the Motor World at that time. It appears, however, in the new bill, which also follows the Phillips measure in dividing motor vehicles into three classes for licensing purposes. The division is made according to rated horsepower and fixes the amount of license fees as follows: For vehicles of 10 horsepower and under, \$5; for vehicles between 10 and 35 horsepower, \$10, and for vehicles of 25 horsepower and over, \$25.

The bill limits the speed of automobiles to 20 miles an hour, providing that in no event shall a person operate or cause to be operated a motor vehicle at a greater rate of speed. In a public highway where the territory is closely built up, the speed shall not be greater than one mile in six minutes. Elsewhere in a city or village the speed may not be greater than a mile in four minutes, or elsewhere outside of a city or village a mile in three minutes.

The bill forbids the operation of a motor vehicle on the public highway when the driver is intoxicated, or is engaging in a race, or running his machine as the result of a wager.

New Bill Ignores Police Lieutenants.

Under the proposed automobile law now pending in the New York State legislature, lieutenants of police will not have authority to accept bail from persons arrested for violating the law. In the section relating to bail, etc., it is provided that any captain. sergeant of police or acting captain or sergeant of police may accept bail. While undoubtedly it is intended that the power of those officers of the police force of New York City, who formerly were ranked as sergeants, is to continue, yet the wording of the law now gives this authority to what were formerly roundsmen, as they are now distinguished as sergeants, and their superiors as lieutenants.

REMEDY FOR NOISE IN CHAIN DRIVE

Good Results to be Secured by Thorough
Cleaning and Lubrication—Effective
Methods for the Process.

To give proper care to driving chains usually entails the dirtiest kind of dirty work. One reason that is often advanced to account for a preference for shaft driven cars, over those where the power is transmitted by chains, is that the former are more quiet. But this explanation is not founded on fact. While it is true that the shaft driven car usually is the more quiet of the two, yet invariably the noise that is made by the chains can be eliminated if proper care is given to them; but because this care means that one must get right into oil, grease, and dirt, it is seldom that the man who looks after the car will do it unless he absolutely is required to do so.

When a chain rattles or squeaks it is the outward sign that it needs oil, and generally the oil is applied to the outside of the links where, though temporary relief from the squeaking is obtained, it serves mainly to collect dirt, and shortly the condition of the chain becomes worse than it was before the application.

If a chain needs oil it should be given oil where it requires it and that is on the inside of the rollers. To accomplish this thoroughly, yet in the simplest way, necessitates the installation of a simple apparatus and then a few minutes of intelligent work. There should be a stove, or heat of some sort over which is placed a pot of very heavy oil, or mutton tallow, or a thick grease that will become fluent when heated. Directly above this in the ceiling, should be a pulley through which a rope with a hook in the end of it should be passed.

The chains should be removed from the car and thoroughly cleaned in gasolene, kerosene, or in a solution of bi-carbonate of soda, after which they should be soaked for several hours in the hot oil or grease that is over the fire. The immersion in this lubricant should be sufficiently long to permit of every part of the chain becoming thoroughly coated. When this has been accomplished, the chains should be drawn out of the oil by means of hook and rope and should be suspended above the pot of oil and allowed to drip into it. When the chains have become cold it will be found that a film of the lubricant has coated the inside of links and rollers; the oil remaining on the outside should be thoroughly removed.

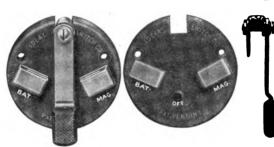
In replacing the chains on the machine, if a proper adjustment is made, they will run without noise and the satisfaction to be gained from a quiet running car well repays for the trouble of giving the chains a proper treatment. A chain cannot be thoroughly lubricated by the introduction of

oil from the outside; it is the inside of the links that must be reached and this can only be done by soaking in a lubricant that is hot. Melted tallow is the best thing, heavy grease that will run freely when hot is the next best, and if neither of these can be obtained, a heavy oil will furnish good results under this method of cleaning and lubricating.

Battery Switch with Novel Features.

One of the new accessories which is likely to find favor with automobilists is the Ideal automobile switch made by the Ideal Switch Co., Inc., of Plainville, Conn.

In addition to furnishing a large contact surface between the blade and the terminals when the circuit is closed, the switch contains other features which are more or less



novel. When the circuit is open the blade readily may be removed. When removed, it practically is impossible to obtain a contact through the switch, as the circuit terminals are on the back of the switch and so arranged that they cannot be brought in contact save through the medium of the blade, which is of an unusual and irregular shape.

When the circuit is closed there is no possibility of the blade being removed from the switch, as the peculiar form of the contact terminals cause them to serve as a locking device which hold the blade in position. Another feature of the switch is that the neutral point, a copper stud which is shown in one portion of the illustration and is marked "off" may be used as a contact point when connected with the ground wire of a high tension magneto.

The switch is strongly made. The body or base is of hard rubber, the contacts are of heavy copper, plain or nickeled, as one may prefer.

Prolonging the life of Horn Bulbs.

Horn bulbs which develop a tendency to crack and break just inside the raised ring which is invariably placed at the "business" end, may be repaired in a serviceable though unhandsome manner, by paring down the ridge carefully with a sharp knife and then cementing on a circular patch of thin rubber, such as may be obtained from an old inner tube. Properly done, such a repair will prolong the life of the bulb to a surprising extent without in the least impairing its usefulness, though its beauty may be sadly marred.

CLEAN STORAGE FOR LUBRICANTS

Its Necessity Illustrated by a Costly Experience—New Car Crippled by Trash

Dropped into the Oil.

Cans containing oil or grease always should be kept covered. An uncovered can of heavy transmission oil recently was the means of putting the owner of an automobile to several hundred dollars' expense, which easily could have been avoided if the receptacle containing the oil had been properly protected against the introduction of a foreign substance.

The car was a new one and having been used for a month or two the chauffeur de-

cided to replenish the lubricant in the transmission case. To accomplish this a plate was removed from the top of the case and heavy oil was poured in. A day or two later at a time when the car was being driven rapidly through the street there was a sudden crash somewhere in the car's interior mechanism, followed by an even more sudden stoppage of the automobile. Without attempt-

ing to proceed further under his own power the chauffeur sent for horses and was towed to the garage. It quickly was found that the trouble was in the transmission case and an inspection of this part disclosed a serious state of destruction; two of the gears were entirely destroyed and the cause of the mishap was found to be a steel washer which was so different from anything that was used in the construction of the car as to identify it as being something that must have gotten into the transmission case when the lubricant was poured in. The can containing the oil was then examined and in the bottom of it were found two more scraps of iron which, through carelessness, accident, or design, had found their way there.

While it is not always practical to strain the lubricant while introducing it into the working parts of a motor car, it is possible to use sufficient precaution to prevent foreign substances as large as a washer or nut from being carried in with it, and owners should insist on precautions, the neglect of which may involve large outlay.

Replacing Union on Gravity Tank.

When it is necessary to replace the union connecting the outlet of a gravity fuel tank with the stop cock, it is best to remove the tank from the car and invert it. Where this is not convenient, however, it is possible to accomplish the desired result without even going to the trouble of emptying the tank, by merely stopping up the air vent in the filling plug. This will check the flow very materially, and by working quickly it is possible to effect the connection without much loss either of time or gasolene.



The Week's Patents.

883,255. Power Lever. William W. Sutherland, Griswold, Iowa. Filed Aug. 26, 1907. Serial No. 390,215.

1. The combination with a frame, of a driving shaft provided with a crank arm, a pedal shaft having a similar crank arm, a pitman connecting the crank arms, levers pivotally connected with the pitman on opposite sides of one of the crank arms, and links pivotally connecting the levers with the frame.

878,564. Wheel for Vehicles. Thomas W. Rieder, Pittsburg, Pa. Filed Feb. 28, 1907. Serial No. 359,841.

1. A vehicle wheel consisting of a hub, radially disposed spokes carried thereby, an inner rim carried by said spokes, a felly surrounding said rim, spring fastening plates connecting with said felly and said rim, pins loosely mounted in said plates, coiled springs interposed between said plates, and having their two end convolutions bent to form eyelets to engage the ends of said pins upon each side of said wheel.

878.706. Carburetter. Lars Anderson, New York, N. Y., assignor to Triplex Gas Engine Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 22, 1906. Serial No. 344,536.

1. In a device of the character described, a chamber in the form of a hollow sphere or globe, and having an unobstructed interior, a pipe for delivery thereinto of the mixture of oil and air, a delivery pipe communicating radially with said chamber, a spherical or globular inclosing casing for said chamber forming a jacket therefor, an exhaust pipe connection delivering from the engine to said jacket, and an exhaust connection to the outer air delivering from said jacket.

878,708. Heated Steering Wheel. Charles Berg, New York, N. Y. Filed March 25, 1907. Serial No. 364,338.

1. A steering wheel provided with a hollow rim, an insulating core therein, a heating coil on said core, another heating coil enveloping the first named coil, insulations for keeping the coils from contact with each other and with the wheel rim, and means whereby current may be suppjied to both coils or one of said coils.

878,713. Vehicle Wheel. Nathaniel Dryden, Los Angeles, Cal. Filed Nov. 19, 1906. Serial No. 344,050.

1. An interacting vehicle wheel, comprising a hub member having a resiliently supported felly and annular guide plates secured thereto, and an outer member comprising two annular rigid members connected together by spokes, and having a plurality of plates secured thereto so as to form annular grooves, said grooves adapted to engage the guide plates of the hub member, whereby the two members are held in engagement.

878,714. Spring Wheel. Harris T. Dunbar, Buffalo, N. Y. Filed Feb. 11, 1907. Serial No. 356,724.

1. A spring wheel comprising a hub, a rim, yielding means operating to hold the rim concentric to said hub, and a frictional connection between said hub and rim, independent of said yielding means, substantially as set forth.

878,747. Starting Device for Explosion Engines with four Cylinders. Hippilyt Saurer, Arbon, Switzerland. Filed October 6, 1906. Serial No. 337,707.

1. In a four-stroke cycle explosion en-

gine with four cylinders, the combination with four spring-pressed inlet valves in the four cylinders, of a connection on the four cylinders above said four spring pressed inlet valves and comprising a cylindrical bore in its middle with four openings to the spring pressed inlet valves, and a roto turn in the cylindrical bore of said connection and provided with two apertures and so driven as to make one revolution on every two revolutions of the crank shaft, its two apertures being so disposed as to severally and each supply compressed air or gas through the respective channel to either of two cylinders during that stroke of its piston, during which in the normal work of the engine the expansion of the exploded gases would take place.

878,954. Driving Mechanism for Automobiles, etc. Henry K. Holsman, Chicago, Ill. Filed April 20, 1907. Serial No. 369,198.

1. In a device of the class described, the combination with the driving shaft and the pair of discs with their driving surfaces facing each other secured thereto of the driven shaft and the driven disc carried thereby located between the driving discs, and means for translating said driving shaft to engage one or the other of the driving discs with the driven disc.

878,948. Carriage Hood. Traugott Golde, Gera-Reuss, Germany. Filed Feb. 11, 1907. Serial No. 356,909.

1. A folding top comprising main hoops and auxiliary hoops pivoted thereto, and outrigger hoops one of which is pivoted at its ends to the forward main hoop and has break joints in its side arms. supporting arms pivoted to said forward main hoop, and at their outer ends having the other of said outrigger hoops pivoted thereto, and being pivotally conected between their ends to the first mentioned outrigger hoop.

878,953. Motive Power. Henry K. Hess, Philadelphia, Pa. Filed March 23, 1903. Serial No. 149,118.

1. A steam engine and a boiler connected thereto in combination with a gas engine, means to conduct the exhaust from the gas engine to the boiler to generate steam therein, a normally closed valve in the connection between the boiler and steam engine, and means actuated by the steam pressure for opening said valve.

878,955. Driving Mechanism for Automobiles. Henry K. Holsman, Chicago, Ill. Filed April 20, 1907. Serial No. 369,199.

1. In a device of the class described, the combination with a traction wheel having a tread surface and carrying a tire rim, of a driving disc having a deep groove whose sides set at an acute angle to each other are adapted to engage the outer edges of the rim, which edges have a corresponding angle, and means for rotating the disc.

879,027. Automobile. Louis M. G. Delaunay-Belleville, Paris, France, assignor to Société Anonyme des Automobiles Delaunay-Belleville, St. Denis, Seine, France, a Corporation of France. Filed Sept. 30, 1907. Serial No. 395,206.

A device of the class described comprising a tube forming a forward extension of the differential box and surrounding the cardan shaft, but not touching it, the front part of this tube ending in a socket and being supported in a bearing arranged at the extremity of a single connecting rod, the other extremity of which is able to rock around a ball fixed rigidly to the chassis.

879,045. Fluid Clutch. William W. Henderson, Washington, D. C., assignor of one-

half to Hugh A. Thrift and William Hinds, Washington, D. C. Filed June 11, 1907. Serial No. 378,415.

1. In a fluid clutch, the combination of a driving member, a driven member, a casing upon one of said members, having therein a fluid chamber and a passage in the casing connecting opposite ends of said chamber, a rolling piston carried upon the other member, and adapted to travel in said chamber and force fluid through said passage when it is open, and a valve in said passage.

879,086. Variable Speed Gearing. Bassett M. Coffee, Richmond, Va., assignor of one-fourth to William J. Whitehurst, Richmond, Va. Filed March 7, 1905. Serial No. 248,860.

1. In a variable speed gear, a driving shaft; a driving pinion fast thereon, a pair of pinions loosely mounted on the shaft for independent movement, a brake drum having an internal rack, a brake shoe for the drum, independent sets of planetary gears that connect the brake drum with both of the loosely mounted pinions and means for locking either of the said loose pinions from revolving, and other planetary gears connecting the first mentioned sets of planetary gears with the driving pinion.

879,100. Friction Clutch. Charles R. Greuter, Holyoke, Mass., assignor to Matheson Motor Car Company, Wilkes-Barre, Pa., a Corporation. Filed Feb. 7, 1906. Serial No. 299,970.

1. In a clutch, the combination with the wheel member, of a fixed clutch shoe consisting of a ring bolted to the wheel member and seated against its rim portion, a spring released movable clutch shoe loosely supported at one side of the fixed shoe, a rotatable hub arranged at one side of the wheel member and carrying a friction disc located between the two shoes, and a plurality of suitably actuated rocker cams supported at one side of the movable shoe and operating against the same.

879,160. Mounting of Road Wheels for Vehicles. Charles W. Fulton, Paisley, Scotland. Filed May 15, 1905. Serial No. 360,572.

1. In a mounting or suspension for vehicle wheels the combination with a short axle for the wheel and a brocket in which the wheel axle can move vertically, of a cross axle carrying the brackets and non-synchronous springs located between the wheel axle and the bracket and between the bracket and its supporting cross axle to which latter one of the springs is connected and means permitting the wheel axle to move laterally relatively to the vehicle.

879,186. Cushion Tire Wheel. Charles A. Marien, St. Louis, Mo. Filed Feb. 21, 1907. Serial No. 368,535.

1. In avehicle wheel, the combination with a rim, of a tire of resilient material seated thereon, crossbars passing through said tire, retaining members of rigid material engaging the ends of said rods but allowing inward radial movement thereof when the tire is compressed, and retaining plates engaging the outer edges of said members whereby the outward radial movement of said rods is limited.

879,195. Wind Shield or Weather Screen for Motor and Similar Vehicles. Henri S. Samuel. Perth, Scotland. Filed Dec. 21, 1905. Serial No. 292,781.

1. A wind guard for vehicles consisting



of a lower rigid flat portion permanently secured to the vehicle and extending trans-versely thereof and inclined rearwardly in proximity to the steering wheel or handle and an upper portion extending upwardly from the lower portion in front of the driver's face.

879,199. Pneumatic Tire. Baldwin F. Schirmer, Indianapolis, Ind. Filed April 15, 1907. Serial No. 368,221.

1. The combination, with a rim and tire casing, of a ring upon said rim, a series of cylinders set therein at frequent intervals, a common chamber inclosed in said ring for all said cylinders and communicating with the inner ends of said cylinders, a piston in each cylinder, a stem and broadened shoe therefor, a casing against which said shoes are adapted to exert pressure, an ananular chember in said ring, communicat-ing with the outer ends of said cylinders, and having an inlet valve, passages leading from the outer ends of said cylinders to the said aforesaid common chambers and valves in said passages.

879,205. Metal Vehicle Body. Hinsdale Smith and Arthur P. Smith, Springfield, Mass. Filed May 8, 1907. Serial No. 372,-

In an improvement of the class described in combination with the side plates of a vehicle body and the doorsill, a sill facing plate extending from the forward seat to the forward upper edge of the rear

879,312. Elastic Vehicle Tire. Edward L. Perry, Paterson, N. J. Filed June 15, 1907. Serial No. 379,241.

1. An elastic vehicle tire having a plurality of transverse perforations or openings therethrough, and plugs having air vents and adapted to engage said perforations or openings, substantially and for the purpose set forth.

879,349. Strain Distributing Device for Vehicles. James Worthington, Manitowoc, Wis. Filed April 24, 1907. Serial No. 369,-924.

In a vehicle, the combination of the axle bars and a spring supported platform, of a set of intermeshing gear wheels connected with the central portion of the plat-form, and strut rods each pivotally con-nected with one of the gears at a point vertically offset from the axis of gear rotation, said gears being arranged to distribute strains from any one of the strut rods to each of the others, some of said strut rods being connected with the platform.

879,367. Friction Transmission Mechanism for Power Driven Vehicles. James H. Cook, Homer, Mich. Filed April 4, 1907. Serial No. 366,450.

1. Friction transmission mechanism comprising a friction disc constructed in two sections, each of said sections being mov-able independently of the other at right angles to its plane of rotation.

879,380. Multiple Carburetter. Charles R. Greuter, Wilkes-Barre, Pa. Filed Feb. 25, 1907. Sérial No. 359,279.

1. A carburetter comprising a plurality of vaporizers, a single throttle common to the several vaporizers, and separate cut-offs for the oil feed for certain of the va-porizers, said cut-offs being operated by the throttle.

879,414. Steering Gear for Vehicles. David E. Ross, Brookston, Ind., assignor to The Ross Gear and Tool Company, La

Fayette, Ind., a Corporation of Indiana. Filed May 10, 1907. Serial No. 372,854.

1. In a vehicle, ground wheels, a rack, pinion meshing with said rack for moving the same longitudinally, means for turning said rack as it is thus moved, and connections between said rack and said ground wheels whereby the turning movement im-parted to the rack turns the wheels for steering the vehicle.

879,428. Cooling Device for Engines. George Wolke, Jacksonville, Ill., assignor of one-fourth to E. P. Kirby, and onefourth to William K. McLaughlin, Jacksonville, Ill. Filed Aug. 9, 1906. Serial No. 329 919

1. An internal combustion motor com-prising a cylinder, a crank chamber com-municating therewith, a piston arranged in the cylinder, a crank shaft housed in the chamber and connected for operation by the piston, a fluid receiving chamber communicating with the crank chamber, means for controlling the admission of fluid from the crank chamber to the fluid receiving chamber, jet tubes opening into and pro-jecting from the latter, and perforated fluid distributing tubes sustained around the cylinder and open ends to receive the respective jet tubes, the open ends of the distributing tubes being of greater internal diameter than the external diameter of the jet tubes.

COMPLETE COURSE AUTOMOBILE INSTRUCTION

Invaluable to the owner or prospective owner of a motor car. Practical and to the point. Send for prospectus to the

Correspondence School of Motor Car Practice Tarrytown, N. Y.

Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

FRANK!LIN Automobiles

Does Franklin air-cooling cool? Over 5,000 Franklins are in active use. Catalogue tells Franklins are in active use. what else it does. Write for it. H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

THE MARMON

For catalog, address Dept. 16. NORDYKE & MARMON CO.

(Estab. 1851)

INDIANAPOLIS, IND.

If you are Interested in Motorcycles THE BICYCLING WORLD and MOTORCYCLE REVIEW

Will Interest You. Published Every Saturday by

BICYCLING WORLD CO... New York City 154 Nassau St.,

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

FOR SALE-1907 Pullman runabout or OR SALE—1907 Pullman runabout or surrey, detachable rear seat, 4 cylinder, 30-35 H. P.; victoria top; Sprague's folding front. Five gas lamps and generator. All metal parts nivkel plated. Tires, Goodrich, Bailey tread. Tires and car good as new; car run 900 miles. Reason for selling, have ordered new 6-cyl. Pullman. Car cost new \$3,000; price, \$1,250. Address Post Box 448, Harrisburg, Pa.

A MERICAN AUTO TIRE REP CO. Invisible patching done on tubes. All work guaranteed. We make your tires new. AMERICAN AUTO TIRE REP. CO., 3446 South Park Ave., Chicago, Ill. Phone, Douglas 5361.

FOR SALE-\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

"CONTINENTAL" MOTORS ARE STANDARD



Get our quota-tions on high grade two and four cylin-der motors, 10 to 45 horsepower. They are equipped with der motors, 10 to 45
horsepower. They
are equipped with
self-contained oiling
system and ready
for attaching magneto. Highes
grade workmanship,
efficient, durable
and simple. Also
clutches and transSend for catalogue.

CONTINENTAL MOTOR MFG. CO., Muskegen, Mich-K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill. T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

LAVALETTE & CO. 80% of Magnetos used in 6-cylinder cars are EISEMANN High-Tension MAGNETOS NEW YORK 112 West 424 Street.



THIS "GOTHAM

is equal to any \$1.50 plug. Has big air chamber, protected porcelain, bronze non-sticking bushing, won't leak,—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price-\$1.00. THE R. E. HARDY & CO., 86 Watts Street, New York City

This is the PULLMAN

4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed One

WITHERBEE IGNITER CO.,

1876 Breadway, New York



1908 Model D. 50 H. P.
New factory, Saginaw, Mich.
Complete catalogue now ready,
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.,
New York.

LOGAN **Exclusive Features**

-Every point of friction carried on a ball or roller bearing.

For other features write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chillicethe, O.



Boston Branch Motor Mart 91 Church St.

New York Garford Motor Car Co.

CHAS. F. KELLOM & CO., Philadelphia Pa.

THE "AURORA"

Runabeut \$775-20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agents. AURORA MOTOR WORKS, Aurora, Ill.

THE THOMAS:

America's Champion in the New York-Paris Race Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Syracuse, N. Y. Water St.

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Meter Car"

McKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY

NEW YORK OFFICE-24 Broad Street. Old Colony Building, CHICAGO.



One of the Leaders. Studebaker Automobile Co., South Bend, Indiana

TRUFFAULT-HARTFORD

SHOCK ABSORBER

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO.,

E. V. Hartford, Pres. 66 Vestry St., New York

\$250 "SUCCESS"

The Original Auto-Buggy
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra
patent ball-bearing wheels; price \$27
\$400. Rubber Tires, \$25 extra. We have the same than the sa

Success Auto Buggy Mfg. Co., Inc. 531 De Ballvere Ave., St. Louis,

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD

FIRESTONE TIRE & RUBBER CO., Akron, Ohlo

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name.

Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



How Are Your Batteries?

A CONNECTICUT VOLT AMMETER WILL TELL YOU

Guaranteed, and the price is right, send for catalogue and trade discounts.

CONNECTICUE TELEPHONE and ELECTRIC Co., Inc. Meriden, Conn.



MICHELIN TIRE CO..

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn



The Ball Transmission Automobiles & Motor Boats

NEW YORK GEAR WORKS. 56 GREENPOINT AVE., BROOKLYN, N. Y.







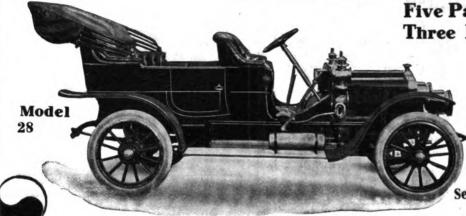
AN ATTRACTIVE CAR AT AN ATTRACTIVE PRICE

PRICE
SPECIFICATIONS—Engine, 4 cylinders, 4½x4½,
28-30 brake horsepower. Transmission, 3 speeds forward
and reverse, selective, Timken bearings. Wheel base,
109 inches; tread, standard; clutch, cone leather.
Body, sheet metal, straight line type, roomy and comfortable. Tires, 32x3½, quick detachable; make optional. Frame, pressed steel, 4½ inches deep. Front
axle, single I-beam drop forging, ball bearings. Rear
axle, bevel gear drive, enclosed type, roller bearings.
Ignition, synchronized jump spark. Weight, empty,
2,200 lbs. (actual, not catalogue).

Represented in Greater New York by THE PALMER & SINGER MFG. CO., 1620 Broadway

Selden Motor Vehicle Company, Rochester, N.Y.

Members A. L. A. M.
Agencies Wanted in Unoccupied Territory.





WILL NOT BURN-GRIPS INSTANTLY-LASTS INDEFINITELY

Write for Particulars

TRENTON RUBBER MFG. 00.,

2900 State Street, TRENTON, N. J.

MOTOR MAKERS



the motors in some of ful cars, for ality before price, and BOTH right.

The "Rutenber" Carburetor

picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

TRIUMPH GREASE

THE LATEST AND BEST ON THE MARKET

WHAT IS IT LIKE?-It is the only "Spongy" Grease in the world. Its velvety consistency is just heavy enough not to run out and leak. Saves labor in cleaning machine. Will not stick or gum. Not effected by heat or cold. WHY NOT TRY IT?

You will never know its merits until vou do. Why be bothered with a smeared machine, when you can procure a lubricant that will NOT leak out, and lasts LONGER than any other? Those who are on the alert for the BEST, usually get it!

Put up in 5, 10, 25 and 50 lb. cans.

Manufactured only by the

Perfection Grease Company,

South Bend, Ind.



OVERLAND ROADSTER THE on





wins event No. 2 (for cars \$1,000 to \$2,000) at the Indianapolis Hill Climbing Contest.

Empire tires are resilient tires—and they wear longest.

Empire Automobile Tire Company, Trenton, N. J.

NEW YORK—148 Chambers St., and Broadway and 73d St.

BOSTON—292 Devonshire Street.
BUFFALO—724 Main Street.
ATLANTA, GA.—Dunham Rubber Co.
DENVER AUTO GOODS CO., Denver, Colo.
PENN AUTO SUPPLY CO.—Philadelphia, Pa.
WAITE AUTO SUPPLY CO., Providence, R. I.
SAVELL RUBBER CO.—Jacksonville, Fla.







\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

rite today for Catalorus and Novelette

W. H. KIBLINGER COMPANY Box No. 250 AUBURN, IND.

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

SINGLE CYLINDER CADILLAC showing actual cost of maintaining their cars. It also contains much advice of value to the automobile buyer. Ask for free copy of Booklet No. 6.

CABILLAC MOTOR CAR COMPANY, Detroit, Mich. Member Assn. Licensed Auto. Mfrs.



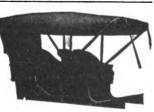


THE DE IS RIGHT

utwear an auto, and it will Send for Booklet

Index Speed Indicator Co. MINNEAPOLIS, MINN.

SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies** SPRINGFIELD METAL BODY CO., 366 Birnie Ave., Springfield, Mass.



Ready-Flated Tires.

They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY 1788-1790 Broadway, cor. 58th St. New York City. "Keep your eye on Continentals"



THE MOTOR WORLD

A.O.SMITH CO.

High-Grade Axles



Pressed Steel Frames

Steering Columns Transmissions Steel Stampings of All Kinds

Send Prints' for Estimates.

243 Clinton Street.

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00. JACKSON AUTOMOBILE CO.. Jackson, Mich.

Bodies Repaired, Trimmed and Painted.
Chassis Repair Department.
J. M. QUINBY & CO.
Automobile Body Builders. Newark, N. J.

Car Accessories Motor

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.
New illustrated catalogue free

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



THE CONTINENTAL AUTO MFG. CO.

AJAX WEAPPED TIRES

Guaranteed for 5,000 Miles Riding Write for copy of Guarantee

AJAX-GRIEB RUBBER CO.
General Office, 57th St. & Broadway, New York
AGENTS IN ALL LARGE CITIES

MORGAN & WRIGHT TIRES ARE GOOD TIRES

To Owners of Cars Costing Over \$1800

Add the neat, snappy little Brush \$500 Rusabout to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit

Silent **Powerful** Fast

TYPE C 50 HP

Of the highest possible grade throughout.

2800 LBS 2800.00 WITH MARKETO 3000.00



Lavurious and Completely Appointed

PENNSYLVANIA AUTO MOTOR CO.,

Bryn Mawr, Pa.

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of Name_

Address

Digitized by Google

FRANKLIN Type G

A touring-car for the family; a service and pleasure car for contractors, doctors and business men.

A good business man will buy his automobile just as he buys a horse—to fit the service required. You don't buy a draught-horse for family use.

The Franklin Type G Touring Car at \$1,850, and the G runabout at \$1,750 are better suited to family and business use than any large, heavy automobile, besides being far more economical.

Type G is as high grade as the Franklin six-cylinder automobiles that sell for \$4,000. Type G has the same materials and workmanship; only it is smaller. It is the proper size for family and business use; it is large enough for touring; but it costs less to buy and to run.

Type G is a standard automobile in all respects. Over 1,900 are in use. Its light-weight (1,600 pounds), and small engine (16 horsepower) make the up-keep and running expense very low.

We know of a business man who has run a 1907 G touring car for over seven months at a total cost of \$8.53 per month. This cost includes \$3 a month for barn rent, all repair expense, oil, gasoline, washing, etc. Large heavy automobiles cost a good deal more than that for gasoline alone.

Many users of large automobiles would get more mileage and more comfort with this Type G. Almost invariably a man who owns a big machine and a small one, uses the small one the most.

Type G is far cheaper to own than a horse. Its service is unlimited.

Like all the Franklin automobiles, Type G has four full-elliptic springs and a laminated wood frame. This construction and light-weight gives freedom from jolting, and perfect riding qualities, so that Type G can be driven easily, safely and fast over all roads. It will go farther in a day over average American roads than a high-power, hard-riding heavy machine. You can test this for yourself.

Another thing: Type G doesn't wear itself out. Depreciation is slight.

There is no other automobile on the market like the Franklin G. Some may be cheaper to buy, but they are heavier, which makes the owning cost more than offset the price.

There is more satisfactory service—more life and miles in type G than in any automobile ever built for the money.

Investigate this G. See it weighed. Put it to the test.

Write for the catalogue describing Franklin models.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

Member Association Licensed Automobile Manufacturers.





Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K—4-cyl., 4%x5 \$3500 Model R-6 cyl., 4½x4¾ \$4200

Model N—4 cyl., 5x5 \$3700 Model T—6 cyl., 5x5 \$5000



Write for Particulars

National Motor Vehicle Company

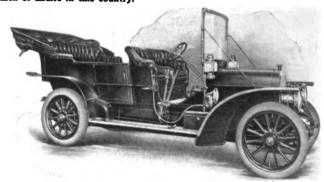
1007 East 22d Street

INDIANAPOLIS, - IN





Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.

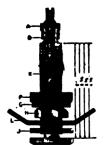


DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sta.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co. Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.
Licensed under Selden Patent.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE



SIMPLE AND ABSOLUTELY AIR TIGHT

■ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturers

Manufactured by A. SOHRADER'S SON., Inc., 28-30-32 Rese St., New Yerk

TRY MILLER

This expression has developed into a trade term

THERE'S A REASON

The public, which in the past, has experienced difficulty in obtaining automobile supplies should give us a trial, by mail, or a personal visit.



We Carry in Stock the Largest Assortment of PARTS, FITTINGS AND SUNDRIES To be Found in this Country

Our Catalog, the most complete one of its kind, is an encyclopedia of motor car supplies; it is used daily by other supply houses and they could not get along without it. A copy mailed to any one on request.

Order from nearest Branch and save time and express charges.

STORES

CHAS. E. MILLER

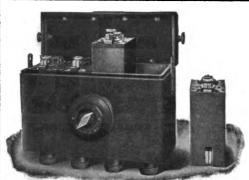
Manufacturer, Jobber, Exporter and Importer

HOME OFFICE: 97-99-101 Reade Street,

S

O R E S

NEW YORK CITY



HEINZE COILS

Send for 1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.



A NEW SENSATION

Equip your car with

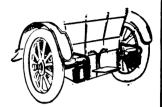
Supplementary Spiral Springs

and notice the difference. No joks, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch Removed to New York Meter Mart Bldg





"RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

TRONG-DURABLE CALELESS-RUSTLESS MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO

PARSONS' MANGANESE BRONZE LEVER CASTINGS



Solo Makers
THE WILLIAM CRAMP & SONS SHIP & ENGINE
BUILDING COMPANY, - Philadelphia, Penna.

AUTOMOBILE BODIES



TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work.

Output for this season, 9,000 jobs, complete, trimmed and finished

RACINE NOVELTY MFG. COMPANY, Racine, Wis.



Hotel Tuller

New and Absolutely Fireproof.

Adams Ave. & Park St.

DETROIT, MICH.

AUTOMOBILE HEADQUARTERS

In center of Theatre, Shopping and Business district.

and Business district.

Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
Ala Carte Cafe
Grill Rooms
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.
L. W. TULLER Prop.
M. A. SHAW, Mgr.

Three Thousand Miles on High Speed

through heavy snow, slush and mud; drifts in Michigan that blocked railroads and at Cincinnati up the famous Indian Hill of 24 per cent. grade with absolutely no slow speed, intermediate speed or reverse, is the record of the Thomas-Detroit Forty "Snow Bird" which is equipped with

TIMKEN Roller Bearing Front and Rear Axles and Transmission Bearings



The E. R. Thomas Detroit Co. write:

"This performance is really marvelous, and the first time that any car has ever attempted a feat of this type. Previously, short runs have been made by various cars with the high speed lever locked in, but the idea of driving a car with nothing but high speed gear, across country in the winter time, has been deemed impossible and never attempted before by any manufacturer. It certainly shows abnormal power in the car and very little loss in the transmission of power from the motor to the wheels. It is a compliment to the TIMKEN COMPANY as well as ourselves."

TIMKEN ROLLER BEARINGS

represent the highest point of perfection as yet attained in the finished steel maker's art in addition to a special knowledge of loads and tractive requirements and how to provide for them.

This tells why the makers of over **60 per cent.** of all high grade American Automobiles and **95 per cent.** of the Trucks made in this country recognize

The Timken Principle Correct and The Timken Quality Supreme

We have important data on loads and haulage of vital interest to everyone who builds or owns a motor car. Sent gladly on request.

The Timken Roller Bearing Axle Company, Canton, Ohio BRANCHES: 10 E. 31st Street, NEW YORK 429 Wabash Avenue, CHICAGO



AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Seven-Passenger 40 H. P. Touring \$4,000



falmer-Singer Four-Thirty The Skima bowi 4 Cylinder \$1,950

Palmer-Singer Town and Country Car, 28-30 H. P., \$3000

If you are thinking of a light touring car, why not get one that is also an ideal town car? The Palmer-Singer Town and Country Car is a beautiful open car, amply powered for country use-and a closed ear for town use-the BEST town car—the BEST light touring car money can buy.

the SELDEN

Metropolitan Palmer & Singer Mfg. Co.

1620-22-24 Broadway, New York 1321 Michigan Avenue, Chicago

The Importance of Good Cylinder Oil

cannot be over-estimated. The very efficiency of your engine depends on the quality of your oil.



Panhard Oil

does not char the piston heads, combustion chambers, or clog the spark plugs.

> it is the one perfect cylinder lubricant. Be sure to ask for the oil in the checker-board can.

GEO. A. HAWS, 75 Pine Street, NEW YORK



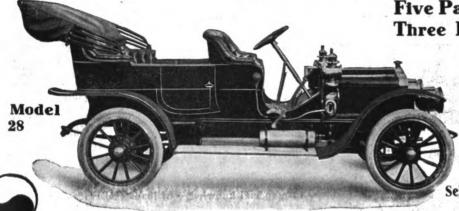


AN ATTRACTIVE CAR AT AN ATTRACLIVE PRICE

PRICE
SPECIFICATIONS—Engine, 4 cylinders, 4½x4½, 28-30 brake horsepower. Transmission, 3 speeds forward and reverse, selective, Timken bearings. Wheel base, 109 inches; tread, standard; clutch, cone leather. Body, sheet metal, straight line type, roomy and comfortable. Tires, 32x3½, quick detachable; make optional. Frame, pressed steel, 4¼ inches deep. Front axle, single I-beam drop forging, ball bearings. Rear axle, bevel gear drive, enclosed type, rofler bearings. Ignition, synchronized jump spark. Weight, empty, 2,200 lbx (actual, not catalogue).

Represented in Greater New York by
THE PALMER & SINGER MFG. CO., 1620 Broadway

Selden Motor Vehicle Company, Rochester, N.Y.
Members A. L. A. M.
Agencies Wanted in Unoccupied Territory.



POSITIVELY WILL NOT BURN-GRIPS INSTANTLY-LASTS INDEFINITELY

TRENTON RUBBER MFG. CO., Write for Particulars

2900 State Street, TRENTON, N. J.

MOTOR MAKERS



that's what we are. We have made the motors in some of the most successful cars, for Quality before price, and BOTH right.

The "Rutenber" Carburetor

which as motor experts we picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

TRIUMPH GREASE

THE LATEST AND BEST ON THE MARKET

WHAT IS IT LIKE?-It is the only "Spongy" Grease in the world. Its velvety consistency is just heavy enough not to run out and leak. Saves labor in cleaning machine. Will not stick or gum. Not effected by heat or cold. WHY NOT TRY IT?

You will never know its merits until vou do. Why be bothered with a smeared machine, when you can procure a lubricant that will NOT leak out, and lasts LONGER than any other? Those who are on the alert for the BEST, usually get it!

Put up in 5, 10, 25 and 50 lb. cans.

Manufactured only by the

Perfection Grease Company,

South Bend, Ind.

EMPIRE AUTOMOBILE TIRE COMPANY,

TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devoushine St.: Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Orc.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 20 La Salle St.; Atlanta, Ga, Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo.; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.



MORGAN & WRIGHT TIRES

than for other kinds,

there might be a reason why some motorists (particularly those who are buying their first car) would accept other kinds in order to save <u>first cost</u>; but it is an entirely different proposition when a motorist can get the kind of service Morgan & Wright tires are known to give at the price of other brands.

John H. Gibson, Assistant Manager Gibson Coal Mining Co., Des Moines, has "gone thru the mill" in tire experience, but has discovered (as a good many motorists are discovering) that tires are not all alike. He says, under date of February 7:—

"It is not very often that the owner of an automobile has anything complimentary to say about tires. I have one of your tires on my Thomas Flyer which has given 7,400 miles of service, with no repairs whatever, certainly an unexpected and very flattering result. I think, in justice to the makers of such a tire, that congratulations are due you."

You can have the same kind of service by using the same kind of tires, and without extra cost.

MORGAN & WRIGHT, DETROIT

Branches, Agencies or Dealers Everywhere



WITHERBEE IGNITER COMPANY
1876 Broadway, NEW YORK

Chicago, 1429 Michigan Ave. Detroit, 220 Jefferson Ave. Buffalo. 720 Main Street

Baltimore Office: 609 Continental Trust Building.

Wico Plugs Exclusive Features of Solar Lamps

(1) The Internal Method of Screw Assembling

All Solar Headlights when assembled are riveted by internal screws. This exclusive feature produces a perfectly smooth exterior surface, permitting ease of cleaning. This is a very important feature for the owner to consider when purchasing a motor lamp.

This important detail and all others explained fully in our new 1908 catalog. Write for copy.

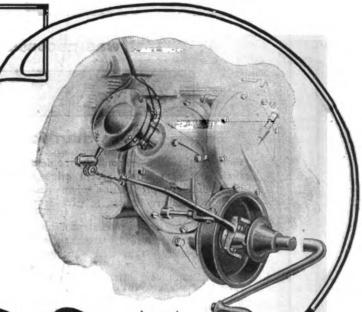
BADGER BRASS MANUFACTURING CO.

Two Factories
KENOSHA, WIS.
436 Eleventh Ave., NEW YORK



The Matter of Safety

is often overlooked by automobile designers and results are often serious, sometimes disastrous. In the



Sprak Retarde MMI

this is considered an important detail and safety of operator and car is given equal consideration.

A leading feature is the automatic spark retarder, by means of which engaging the starting crank positively retards the spark, thus removing all danger from premature ignition.

As to safety of the car, there is no greater source of trouble than loosened bolts or nuts.

In the Rambler this is prevented by the use of Rambler lock nuts that positively cannot come loose, or by castellated nuts locked in place by cotter pins.

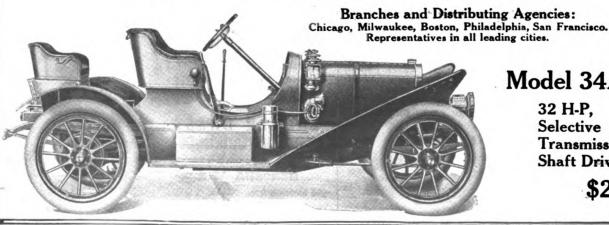
These are in themselves but small things, but it is such attention to little things that makes the Rambler

The Car of Steady Service

Our catalog tells the story. Write for it today or see our nearest representative.

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin.



Model 34A.

32 H-P. Selective Transmission Shaft Drive

\$2,250.



New York, U. S. A., Thursday, April 23, 1908.

ADVISES MAKERS TO CO-OPERATE

American Consular Representative Says It's

Best Way to Open South America—

Brazil as an Example.

"Special representatives sent here by the more progressive and aggressive manufacturers to study the field find that there is nowhere in Brazil a distinctively American house handling American manufactured products." savs Vice-Consul General Slechta in a report to the Department of Commerce and Labor. "There are two or three dealers in agricultural machinery in Rio de Janeiro who give preference to certain lines of American goods. Almost all others are concerns with German, British, or French connections, which give decided preference to goods originating in their respective countries. It is easy to see just what this means. In the matter of automobiles, for example, there are in Rio de Janeiro four well-equipped garages with repair facilities, but in not one of them can an American machine receive the same attention as a French, German, or English car. This is due, in a great measure, to unfamiliarity with American automobiles.

"During the past year not less than eight large motor car manufacturers in the United States have had special agents in Brazil, but as yet not one of them has been successful in establishing an agency that does any business for the manufacturer. None of the concerns which have taken agencies of American automobiles are in a position to establish a repair shop and garage facilities, because such a course involves an outlay that the present demand for any particular make of American car does not warrant. As long as these conditions continue Brazilians will buy other than American machines. It is not reasonable to expect individual manufacturers to establish branch houses in Rio de Janeiro, but certainly there are enough American cars of various makes to warrant the establishment of a repair shop and garage especially for American cars.

"This, it would seem, might be made a 'legitimate function of the Association of Licensed Automobile Manufacturers. Perhaps for the first six months such an establishment would not pay expenses, but it ought to be the means of securing a foothold for American built motor cars in a market which is certain to demand an increasing share of attention on the part of the foreign departments of American automobile factories. The association should establish a permanent exposition of American cars and, in connection therewith, make it their object to work with each member of the organization to the end of securing proper local agents in other Brazilian

Pope Receivers Make a Full Report.

Albert I. Pope and George A. Yule, receivers of the Pope Mfg. Co., have filed in the Superior Court at Hartford, Conn., a statement of the business transacted by them as receivers from August 14, 1907, to and including March 31, of this year. It shows that they received \$880,496.04 and disbursed \$822,952.34, leaving a balance of \$77,791.25. In addition to the financial statement the receivers make a general report of the condition at the factory.

Brock Returns to the Autocar.

Marcus I. Brock is back at his old post, that of sales manager of the Autocar Co., Ardmore, Pa. He filled that office previous to his engagement as assistant general manager of the Association of Licensed Automobile Manufacturers.

Bartlett Joins the Long Arm System.

E. J. Bartlett has been appointed chief engineer of the Long Arm System Co., Cleveland, Ohio. Previously he was attached to the engineering staff of the Electric Vehicle Co.

V. E. Minnich, director of the selling division of the H. H. Franklin Mfg. Co., has resigned that office.

A. M. C. M. A. ASSUME WHOLE SHOW

Acts Promptly After Withdrawal of Automobile Club—January Dates Probable
—Road Show "Postponed."

The Automobile Club of America having more or less gracefully bowed itself out of the show business, its former not wholly silent partner, the American Motor Car Manufacturers' Association, lost no time in very cheerfully assuming the whole burden. This was done at a meeting of the association's show committee in New York on Tuesday last, when it was announced that Grand Central Palace, New York, already had been leased and again will be the scene of the "independent," or open show, as the promoters prefer that it be styled.

The dates for the show have not been definitely settled, but it is practically assured that January dates will be selected. The Association had its fill of so-called "early shows." There is not a voice in favor of another event in October.

The show committee of the Motor and Accessory Manufacturers, Inc., was in conference with the A. M. C. M. A. body and will be apportioned a block of space, as heretofore. The show will be, however, an open one in every sense, and despite the glowing reports of the exclusive importers' "frost" in Madison Square Garden in January last, it is probable that all of the importers who are not allied with the Association of Licensed Automobile Manufacturers will be found in the Palace show.

In the diplomatic language of one of the officials, the traveling trans-continental which the A. M. C. M. A. contemplated, has been "postponed, but not abandoned." but the expense and obstacles were found to be so great that probably the last has been heard of it. It was found that the cost would exceed \$110,000; no reduction of fares being obtainable. The association itself also would be required to conduct the dining car service.

IN THE RETAIL WORLD.

Lombard & Wood, a new firm, has located on Columbus avenue, Boston, to deal in second hand cars. They have taken the office formerly occupied by E. S. Breed.

The Twenty-first street Garage Co. has been incorporated in Toledo, Ohio. George L. Craig, formerly of the Craig-Toledo Automobile Co., is the chief stockholder.

C. S. Henshaw has opened headquarters at 288 Columbus avenue, Boston, as New England representative for the Haynes. He occupied the same premises several years ago.

Priest & Dinneen, Cheyenne, Wyo., resently opened a new garage in that city, where they sell and let cars. The firm operates under the name of the Cheyenne Rubber Tire Co.

George K. and Harry E. Rapp are to open D. S. Spencer's shop at Oyster River, Saybrook, Conn.. as a repair shop. They will equip it fully for the work of repairing automobiles, boats and engines.

Percy H. Johnson has leased the City Hall garage at 9 and 11 Hill street, Newark, N. J., and will make a specialty of storing automobiles. He will operate it in connection with his place at 265 Halsey street.

The Livingston-Ramsdell Motor Car Co. has leased part of the De Camp building at 234 Halsey street, Newark, N. J., and will conduct the agency for the Palmer & Singer cars. Arthur Newton will be sales manager.

The Pelen Automobile Co. has been formed at Logansport, Ind., and has located a garage in South Champion street. William Pelen and Anson Thornton compose the company which will handle the Jackson cars.

Charles F. Cleveland has opened a garage at 225 West Broadway, Princeton, Ind., where he carries a stock of accessories and supplies. He deals in automobiles and bicycles, and makes repairs on both classes of vehicles.

Janesville Wis., is to have a garage on West Washington street. Frank Millman and E. J. Manning are fitting up a livery barn building for the purpose. They will conduct a repair business in connection with the garage.

Prophetstown, Ill., is to have a first class automobile establishment, comprising a salesroom, garage and repair shop. P. C. Kempster has begun the erection of a brick building, about 50x36 feet, which will be pushed to early completion.

James Crotty and John P. Viola, of Great Barrington, Mass, constituting the firm of Crotty & Viola, have purchased the automobile business conducted by Charles S. Taylor in a building which they own on Railroad street. The business is to be managed by Ellis Holbrook.

The first garage at Superior, Wis., is to be established by the Russell-Rhodes Co., who will handle the Franklin cars. It will

be located at 912 Ogden avenue. The members of the company are A. M. Russell, H. C. Russell and A. L. Rhodes, all of whom are familiar with automobile work. They contemplate establishing later a garage in Duluth, Wis.

Bar Harbor, Me., is to have a larger garage this summer than the one conducted last season by F. P. Pray & Son. The same firm will provide it. The location is outside the limit within which motor cars are prohibited. Mr. Pray has made arrangements to meet cars at Hull's Cove, taking the owners across by carriage or launch after the cars have been housed.

Robert Gugin, the Franklin dealer at Vancouver, B. C., has formed a co-partnership with H. S. Rolston. Rolston is secretary, treasurer and manager of the Walworth-Rolston Co., dealers in vehicles and farm implements. The new co-partnership will operate under the name of the Franklin Automobile Agency and will handle Franklins exclusively. A new show room will be opened in the building of the Walworth-Rolston Co.

E. O. Hall & Son, Honolulu, H. I., have purchased the garage of the Associated Garage Co., Ltd. The building is located on the corner of two main streets and is 60x 200 feet; it is of brick and concrete and modern in every respect. The Associated Garage Co. was organized originally by a number of enthusiastic automobilists of Honolulu, but the Garage organization as a mutual benefit society did not prove a financial success and the owners were glad to sell out.

J. W. Mason, Newark agent for the Maxwell and the Stoddard-Dayton cars, has opened new salesrooms at 350 and 352 Halsey street. The garage, considered one of the most complete in New Jersey, was formally opened on Saturday afternoon, 18th inst., with a brass band and refreshments for the entertainment of the many invited guests. The new building has a frontage of 45 feet and a depth of 100.

Important Decision Affecting Garagemen.

Even when a car is accepted as "dead" storage, the garageman is responsible not merely for its safe keeping, but for a deterioration due to neglect, is the substance of a decision handed down this week by Justice Weil, in the municipal court for the Fifth District, New York. It grew out of the suit of Miss Gertrude G. Rothschild against the Empire State Garage to recover damages for loss of parts of a battery and deterioration to tires of her electric victoria. In her complaint she asserted that she left her car at the garage on dead storage in December, 1906, and that when she sent for it the next summer she found the tires in bad condition from not having been "jacked up" and because the machine had not been kept in a dry, light place; in addition, certain fittings had disappeared. She recovered judgment for \$113 and costs.

THE WEEK'S INCORPORATIONS.

Wilmington, Del.—Maxwell Taxameter Co., of Wilmington, under Delaware laws, with \$500,000 capital.

Cleveland, Ill.—Cleveland Motor Car Co.. under Illinois laws, with \$300,000 capital. Corporator—R. Bacon, Jr.. Chicago, Ill.

Denver, Col.—Pavelka-Winter Auto Co.. The, under Colorado laws, with \$2,500 capital. Corporators—W. C. Faucett, E. A. Pavelka, and Karl Winter.

Denver, Col.—Donaldson Motor Car Co. The, under Colorado laws, with \$10,000 capital. Corporators—Arthur S. Donaldson. Elmer T. Soden, and Samuel R. Steinmetz.

Lockport, N. Y.—Lockport Rubber Works, under New York laws, with \$300,000 capital. Corporators—J. E. Davis and Harry M. Wood, Erie, Pa.; M. Steele, Lockport, N. Y.

Boston, Mass.—Blair-Forth Mfg. Co., under Massachusetts laws, with \$100,000 capital; automobiles. Corporators—C. Forth. president, Winthrop, Mass.; W. Blair, treasurer, Newton, Mass.

Detroit, Mich.—John H. Brady Auto Co.. The, under Michigan laws, with \$10,000 capital; to buy sell, repair, and store automobiles. Corporators—John H. Brady, Albert L. Stephens, Martin Borgman.

Jackson, Tenn.—Southern Motor Works. The, under Tennessee laws, with \$50,000 capital. Corporators—Atwell Thompson, W. H. Collier, Exile Burkitt, L. L. Curtiss. and W. E. McClamrock.

Brooklyn, N. Y.—Electric Welding Co., under New York laws, with \$24,000 capital. Corporators—Ove Lange, 260 Eighty-third street; Christian Nielsen, 209 Ninth street; Herman O. Amundsen, 269 Eighty-third street, Brooklyn, N. Y.

New York City, N. Y.—St. Louis Car Automobile Co., under New York laws. with \$20,000 capital. Corporators—John F. Valieant, 5 Nassau street; Louis A. Hopkins, 1706 Broadway, New York City, N. Y.; Warner S. McCall, St. Louis, Mo.

New York City, N. Y.—Uptodate Mfg. Co., under New York laws, with \$25,000 capital; manufacturing automobiles, motors. etc. Corporators—C. S. Goodfellow, Rockaway Beach, N. Y.; J. R. Conkey. New York City, N. Y.; J. Van Vliet, Baltimore. Md.

New York City, N. Y.—Hexter Taxameter Cab Co., under New York laws, with \$100,000 capital. Corporators—Ralph Hexter, 207 West 120th street; Thomas F. McDermott, 121 West Eighty-ninth street, New York City, N. Y.; George F. R. Snowden, 363-A Fourteenth street, Brooklyn, N. Y.

New York City, N. Y.—Terry, Tench & Proctor Tunneling Machine Co., The, under New York laws, with \$1,500.000 capital; to manufacture tunneling machinery, engines, motors, cars, trucks, etc. Corporators—J. J. Banks, Denver, Col.; A. S. Luria, E. E. Morris, New York City, N. Y.

TO RESTRICT RIGHTS IN PATENTS

Congressional Bill to Amend Laws and Prohibit Sale or Lease to Combinations

—Cancellation the Penalty.

Representative Campbell has introduced a bill into Congress to suspend the patent and copyright laws of the United States when a patent or copyright or any article or product protected by patent or copyright is owned, leased, or used by any trust or monopoly in violation of any law in restraint of trade by providing that whenever any letters patent issued by the United States, or any article, commodity, compound, device, mechanical appliance, or machine protected by patent; or any article protected by copyright issued by the United States is owned, leased, used, or controlled by any individual, firm, association, syndicate, corporation, or combination which is engaged in any vocation, business, or enterprise in violation of any law of Congress or of any State, prohibiting, restricting, or regulating trusts, monopolies, or combinations which operate in restraint of trade, the right to any protection under the patent or copyright laws of the United States shall cease and terminate.

It would be the duty of the Attorney-General or any district attorney to institute suits in law or equity when the facts should warrant such suit or suits in any U. S. circuit court where the patent or copyright is owned, leased, used, or controlled, or the articles or products referred to are manufactured, used, produced, or sold in violation of the Act.

It would further provide that the final judgment or finding of the U. S. Circuit Court that any letters patent or copyright of any article, compound, commodity. device, mechanical appliance, machine, or any other work protected by letters patent or by copyright is owned, leased, used or controlled by any individual, firm, association, syndicate, corporation, or combination engaged in any vocation, business, or enterprise, in violation of any law of Congress, or of the State prohibiting, restraining, or controlling trusts, monopolies, or combinations which operate in restraint of trade shall operate as a forfeiture or cancellation of such letters patent or copyright. The leasing of patents is common and the effect of the law would be far reaching.

Weidner Succeeds as Amateur Sleuth.

George Weidner, who represents the Warner Instrument Co. in Detroit, Mich., has developed the "detective instinct." About three weeks ago the Warner branch in Detroit, at 239 Jefferson avenue, was broken into and over \$1,200 worth of Auto-Meters and connections were stolen. Weidner suspected Walter Morris, a negro. of having committed the theft, but he couldn't

see how the colored fellow was going to get rid of the property, but when Morris made a trip to Cleveland, Ohio, he was trailed and arrested there and brought back to Detroit. In the sweat box he confessed that he had stolen the instruments and sold them to one Robert Wachman, of the Wachman Motor Mfg. Co., but when Wachman was brought to police headquarters he denied all knowledge of the matter. Finally he became anxious and sent for his attorneys. They came and advised Wachman to "fess up" upon being granted immunity from arrest. This he did and the speed indicators were found where he had buried them securely wrapped in hay in the rear of another store. Wachman bought the entire lot of stolen goods at a less than "bargain price." He paid the negro thief but

Mercedes Liabilities and Assets.

Schedules in bankruptcy of the Mercedes Import Co., New York, which was backed by "Ice King" Charles W. Morse, but which failed several weeks since, show liabilities of \$228,755, and nominal assets of \$261,514, consisting of cash on hand, \$2,395; cash on deposit, \$134,777, of which \$132,995 is with C. L. Charley of Paris, and the balance in banks here; notes, \$16,715; accounts, \$43,-195; stock of automobiles, parts, etc., \$32,-517; machinery, \$1,102, and office furniture and fixtures \$813. Among the creditors are the National Bank of North America, \$81,979, of which \$4,500 is secured. The bank and Henri Lehman both claim to be owners of a note of \$25,000 of the company to C. L. Charley for money loaned; First National Bank of Bath, Me., \$18,500 on a note of the company to C. L. Charley for money loaned, and the bank and Henri Lehman both claim to be owners of the note; Garfield National Bank and C. W. Morse, \$25,000 on a note of the company to Mr. Morse for money loaned and by him discounted at the bank; A. Brann, \$12,500 on a note of the company for money loaned and pledged to the National Bank of North America as collateral; Mr. Brann and John S. Primrose each own half of the note; R. E. Fulton, \$6.300, money loaned; Smith & Mabley, \$31,754. The following Paris creditors are on contingent liabilities: C. L. Charley, \$12,233, for commissions; Rothschild & Son, \$10,480; Kellner & Son, \$5,-242, and Grummer, \$10,493, for automobiles ordered but not taken.

Yule Goes from Lamps to Golf Balls.

W. H. Yule, son of George A. Yule, one of the receivers of the Pope Mfg. Co., and who has been active in the affairs of the Badger Brass Mfg. Co., of which he is a director, has tendered his resignation to accept the management of the golf ball department of F. F. Goodrich Co. Yule long has been prominent in golf affairs, having won among other things, the Wisconsin State championship, and the call of the greens proved too strong to be resisted.

MORE "SUBSTITUTION EXPOSED"

Splitdorf Gets Complaints About Coils and Unearths the Cause—Inferior Imitations Sold as Genuine.

While almost all automobilists realize the necessity of making replacements with parts made by the manufacturer of the original article, it is found that it always is not the simple matter one would think to obtain the genuine. A case in point is well illustrated by the recent experience of C. F. Splitdorf, whose ignition specialties are so well known as to lead to the conclusion that substitution for them would be almost impossible.

For several weeks Splitdorf had been receiving complaints that his coils were not giving satisfaction. Investigation showed that the complainants, in every instance, had used the coils for a long time, with entire satisfaction for many months, but later with results that were far from satisfactory to the owners. A peculiar feature of the complaints was in the fact that they were made only by persons living in a certain part of the west.

Several coils were sent to the factory where they were carefully examined and it was found that the contact screws and springs were the cause of the trouble. For a long time the experts were puzzled, for though it quickly was learned that the contact points on the screws and springs were made of german silver instead of iridio-platinum, it was not understood at the factory how this could be as no german silver had ever been used there for this purpose. Finally it was found that the entire screw and spring had been made by some irresponsible manufacturer who so closely imitated the genuine articles that even the Splitdorf people were fooled.

Following out this clue, the maker of the counterfit parts was soon discovered and notified that unless he stopped the manufacture of the imitations he would be proceeded against in the courts. As an additional precaution the originals now are all stamped with the Splitdorf name.

German silver is almost totally useless as a contact point, as the heat from the sparks quickly destroy it and when destroyed the results to be obtained from the coil are very poor.

Duryea Brings Forth the "Buggyaut."

Charles E. Duryea will style his new motor buggy the "Duryea Buggyaut." It will be built in the old Duryea Power Co.'s factory at Reading, Pa. The motor is of the two cycle type air cooled and of 10-12 horse-power. Duryea's invention, described in his own words, consists of "grooved friction driving rollers, a few necessary fittings, a common buggy and a motor." It will sell for \$750.

It's a Heap of Satisfaction

-Maxwell owners say—to drive a car you're not ashamed of in any company—one that, like a wellbred woman, however meagre her purse, is yet at home in the best society.

Now there be cars which, tho sold for only a little less than Maxwells, yet have such a shoddy appearance—such a "dinky" aspect—such a "cheap" look—the owners always feel like apologizing for driving them—tho a slim purse is surely no disgrace.

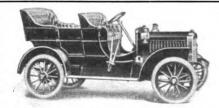
What is it gives to such cars the cheap look? It's difficult to define. Yet it's there—you can't escape it any more than you can fail to notice illbreeding, however rich the garb with which it is clothed.

Next time you go to the Country Club, the golf links, anywhere that Wealth and Culture meet, note how many Maxwell cars and how few other lowpriced ones are parked among the Foreign Nobility and the High Caste American machines.

And the Maxwells will look as if they belonged there; the others like a country bumpkin in a drawing-room—well meaning but out of place.

It's this indefinable something—this outward appearance that somehow tells of quality inherentbred-in-the-bone construction—has given Maxwells the title "The Aristocrats of Moderate Priced Cars."

Maxwell cars are made in six models; ranging in price from \$825 to \$3000 Perhaps the most popular model this year is the four-cylinder, 24-28 horse-power family touring car at \$1750—same chassis equipped with "roadster" type body, seating two in rearsame price.



Model "D"-\$1750

The catalog tells all about all of them—and it's free.

MAXWELL-BRISCOE MOTOR COMPANY

Members A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories:

Tarrytown, N. Y.

New Castle, Ind.

Pawtucket, R. I.

INCOMPARABLE

THE SERVICE



WHITE WINS FORT GEORGE HILL-CLIMB

A 30 horse-power White Steamer scored the fastest tim in the great hill-climb in New York on April 9th, making the ascent of Fort George Hill from a standing start in 321/2 seconds, as compared with 36 seconds, scored by the fastest of the gasoline cars. All makes, domestic and foreign, claiming special hillclimbing ability, were represented in this contest.

The White has won so many important hillclimbs that its superiority in this style of competition is no longer questioned. The reasons for this superiority may be stated as follows:

- 1. The White engine, when called upon to do so, can probably develop more power than any other type.
- 2. It is certain that a larger percentage of the power of the engine is delivered at the rear wheels in the White than in any other machine. This was proven with mathematical exactness in the great English contest at South Harting, held for the purpose of determining this point.
- 3. The question of proper gearing for different gradients is not a vital one in the case of the White, as the car adapts itself perfectly to varying conditions. In other words, the unique flexibility of the White is of considerable advantage in hill-climbing contests, just as it is in touring or in city use.

Catalog, Bulletins and White Rou'e Books sent on request

THE WHITE COMPANY **CLEVELAND, OHIO**

New York City, Broadway at 62d St.
San Francisco, 1460 Market St.
Philadelphia, 629-33 N. Broad St.
Pittsburg, 138-148 Beatty Street.

Boston, 320 Newbury St.
Chicago, 240 Michigan Ave.
Cleveland, 407 Rockwell Ave.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

**ETChange of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address. "MOTORWORLD." NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 23, 1908

Clearing of the Dashboard.

One token which shows that the every day owner has come to regard his motor car as a utility rather than as a play toy is evidenced by the tendency to get away from the use of gimcracks adorning the dashboard and other conspicuous parts of the machine. Formerly it was the rule rather than the exception for the automobilist to fit out his car with every imaginable sort of a contrivance running from an electric cigar lighter to a barometer. But this disposition to equip with every conceivable novelty or accessory that may be devised by the imaginative brain for the purpose of enticing the dollars from the pockets of the unwary, has given way to the sensible idea of utilizing only those things which may be of real service. In arriving at this determination, the private owner has undoubtedly been influenced by the action of many of the more prominent

manufacturers who have ceased to so furnish the dashboards of their cars that they created the impression of an accessory exhibit at an automobile show.

Instead of coil, oiler, clock, switch, etc., the dashboard of a modern car contains only a sight feed glass and a switch; even the coil has been placed out of sight on many cars and where formerly brass trimmings abounded they have now been largely done away with or have been exchanged for oxydized embellishments which look as well and require less attention. While there still is and always will be a demand for those accessories which add to the comfort or convenience of the occupants, the day has passed when a host of useless ornaments will be thought necessary as adjuncts of a properly equipped car. Signaling devices for limousines, and speed indicators for all cars have proven their value and become necessities rather than luxuries, but the days of thermometers and barometers, grade meters and various other gimcracks as fittings for the dashboard has passed, and with the passing comes the evidence of a sane conclusion that the automobile is a vehicle of utility rather than a means for ostentatious display.

The Used Car Situation.

With the rapid increase in the number of cars in use, or at least extant, the problem of dealing with the used, otherwise second-hand car, is daily becoming more complicated. It is an unquestionable fact that the number of purchases of new cars involving the exchange of used cars, either directly or incidentally, is on the increase. Evolution of marketing conditions has bred a most perplexing situation for the agent and dealer out of this natural state of affairs and one which is likely to become even more vexing as competition grows keener.

Many agents make it a rule to take no cars in trade, except those of the lines they themselves handle regularly; others make no trades at all; still others, fearful of losing business by such a policy, give way to various exceptions and take on cars which appear to be readily saleable; again, others are glad to trade on any basis so long as there is a look-in for speculative profit. The problem in this connection is to determine rightly how to dispose of these exchanges which, strictly speaking, are nothing more nor less than collateral covering the price of the sale. Obviously, the sooner the second-hand machine is

cleared from the floor the sooner the full benefit of the sale is realized. This is an important point, especially to the agent dealing on small capital. But how to accomplish this, and how to reduce to its lowest terms the "risk" which is involved in any second-hand proposition, is entirely another matter.

Broadly speaking, but two courses are open to the agent who finds himself in this dilemma. Either he may hold the machine and attempt to accomplish its sale himself, or he may turn it over straightway to a second-hand dealer accepting in return that individual's cautious appraisement of its value in return. In the first instance, the costs of repairs and overhauling, storage, selling, and the incidental charges, not to mention the delay in closing the account of the original sale, must fall on his own head. In the second alternative, he must suffer a loss which is supposed to compensate for these factors, but which in addition robs him of the possible profit of a "lucky" sale as well as that which goes to the pocket of the second-hand man. Furthermore, in the latter instance, he places himself in the unpleasant position of catering directly to a class of dealers who are openly regarded as a thorn in the flesh and a disturbing as well as demoralizing factor in the trade.

The second-hand dealer is a specialist in his own line; he has nothing at stake in the way of reputation, as a rule; he recognizes no conflict of scruples in recommending one car or another to the possible customer; and generally speaking he is able to command a better price than the "legitimate" dealer, who is compelled to subordinate all other business to the main chance of selling for the maker or makers he represents. In this way the second-hand dealer furnishes a natural and happy outlet for cars taken in trade, and in most cases, the exchange of a new for an old car is accomplished with better all-around economy when the regular agent acts as a clearing house for the trade than when the original owner sells direct to the secondhand dealer and subsequently buys outright of the agent.

Were it possible to bridle the dealer in used machines to confine him to that line exclusively and prevent him from acquiring bankrupt stocks to sell at cut prices, and otherwise practicing the tactics of the shyster, his recognition would be more cordial and his support more genuine and legiti-

mate. As it is he is a poser and his influence makes the second-hand problem a knotty puzzle.

Possibilities of Producer Gas.

Producer gas, though employed to a considerable extent in large industrial plants where it is essential to reduce the cost of power as far as possible, has not generally come to be considered as a possibility in connection with the propulsion of motor vehicles. The description of certain tests with a form of producer especially designed for automobile use, as recorded in another column, is, therefore, of no little interest, because producer gas is essentially an economical product.

The producer is a refined form of gas generator to which is added a scrubber of some sort, capable of removing only the coarser impurities from the gas, and so delivering it to the engine-made to order, as it were. It is practically a carburetter for solid fuels. By its use, the combustion of solid fuel is divided. The earlier stages are devoted to the heating of the fuel to a point where it gives off the combustible vapors which under ordinary circumstances would yield to combustion. The process stops short of that point, however, because of the lack of a sufficient supply of oxygen to carry it on. The second stage involves the combustion and expansion of those gases together with a much greater volume of air in the cylinder of the ordinary internal combustion motor. From the economic standpoint a greater proportion of energy can be obtained from a given amount of fuel by the use of a producer and gas engine than by transforming the same basic supply into the latent energy of steam and using it expansively in an engine. Compared with the power obtainable from liquid fuel by the simple process of vaporization and aeration, it is still cheaper when measured in terms of net cost.

Because of the necessary weight and size of the apparatus, the use of producer gas for automobile purposes will probably be limited to the purposes of the commercial vehicle. That it is possible to construct small plants on a fairly economical scale has been proved by the success of the Capitaine system, as applied to motor boats abroad, as well as by the case more in point in this connection. As a problem, the use of this system involves the design of a compact and efficient form of generator, which

THE MOTOR WORLD

considering the fact that the suction producer, the type suited to this class of work was only introduced on a commercial scale in 1895, is by no means a sinecure.

In order to work out a suitable design, the builder must begin at the beginning and proceed along lines which are largely emempirical and based on personal experience, to a great extent. Therefore progress cannot be rapid. At the same time, the possibilities attendant upon the direct use of coke or anthracite without the complication of the steam boiler and its auxiliaries. is too attractive to be ignored. With the probable future use of heavy road trains employing multiple-unit power plants and working in competition with all other modes of freight transportation, the question of fuel cost will be regarded in a very different light from that of the present time. In such a case, the fact that the cost of traction per horsepower may be more than cut in half-which is a conservative estimatemakes the inducement to attack the matter of producer design for this particular purpose a most alluring one.

Contributing Cause of Accidents.

While neither excuse nor palliation can be offered for the automobile driver who is a party to or the cause of an accident that occurs while his car is traveling at a high rate of speed, there are conditions under which an accident may occur when the driver is far less culpable than appearances seem to indicate. It long has been recognized that there is a clearly defined limit to the sustained nervous energy of which mankind is capable.

Legislatures have found it necessary, for the protection of public safety, to make laws governing the number of hours of duty which may be demanded of railroad employes, and others, whose labor had to do with the preservation of the lives of travelers. And these laws have been passed and have been enforced to the end that no man, whose mental and physical activity has been diminished by the abnormal strain of long, continued application to labor that saps his nervous energy, should be in charge of anything-locomotive, trolley car or switch, where the safety of mankind would be jeopardized by his inability to handle emergencies that in a normal mental and physical condition would not present serious problems.

Unfortunately the owner of a motor car too seldom realizes that there is a limita-

COMING EVENTS

April 24, Westchester county, N. Y.—Stock chassis race for Briarcliff trophy.

April 28, Norristown, Pa.—Norristown Automobile Club's endurance run to Lancaster, Reading and return.

April 29, 30 and May 1, Detroit, Mich.—Detroit Automobile Dealers' Association's three days' reliability run to Saginaw, Kalamazoo and return.

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

tion of the powers of his chauffeur. The latter often finds that the duties devolving upon him are in part to make the early morning trip to the owner's office, then to return to take madame on a shopping tour, followed by a ride through parks and drives in the afternoon, the theatre at night and then a ball or dinner, which keeps him from his bed until the early morning hours, a brief time for sleep and then to repeat with slight variation the same thing.

Obviously human nature can stand this strain only for a very short time. Then when mentally unstrung and physically tired, an emergency arises, the chauffeur is not capable of the clear, quick thought and action necessary to avoid the accident, and he is blamed for carelessness when in truth the condemnation should be visited upon the head of the employer who, considering only his own desires, demands of another that which no man is capable of giving. It is a contributing cause of accident too often unsuspected and rarely, if ever, remarked.

TROUBLES BESET BRIARCLIFF RACE

Threatened Hold-up Causes Promoters to Scurry for Cash—More Preliminary Accidents on the Course.

Despite its near approach, the race for the Briarcliff trophy, which is due to take place over 32 miles of crooked roads in Westchester county, New York to-morrow (Friday) morning, is still somewhat "up in the air. In fact, there were inside whispers yesterday afternoon that the race might be postponed.

State Engineer Frederick Skene has got his dander up and has sprung an eleventh hour holdup of the promoters by threatening to stop the race unless sufficient cash is deposited with him at once to cover the cost of damage that the race will do to the roads.

There is a statute which provides that before a contest is run over the State highways a sum of \$200 for every mile used first must be deposited with the State engineer to be used to repair any damage caused by the race.

It appears that in making preparations for the race some one carried on negotiations with a subordinate in Skene's office, instead of with the State engineer himself, and the latter got mad. He determined to show the Briarcliff promoters "who's who," and he is doing it in a manner not calculated to smooth the tempers of Chiefs Moore and Morrell.

When the ultimatum came from Skene that unless the money was deposited in his office he would order the sheriff to stop the race, Moore and Morrell began to "throw fits." They scurried about and secured a bond for \$4,500 from a bonding company, but Skene said only cash would be acceptable. After considerable persuation, the promoters induced Skene to come to New York Tuesday night, and talk it over. A long session resulted, but Skene remained obdurate and as the promoters have need for all the cash available, they are much distressed. At present the deadlock is still on, but expected to be broken at any moment. So far as can be learned, the Automobile Manufacturers' Committee. which is the style employed by Messrs. Morrell and Moore, has not been incorporated, nor has any bond been executed indemnifying the promoters and participants from accident, so that apparently each individual will be responsible for any accident or damage that may result.

If present arrangements are carried out the 22 cars will start from in front of the grandstand at Briarcliff Manor, at one minute intervals, beginning at 4:45 a. m., in the following order:

Piston
No. Driver. Car. Displacement.
1 Paul Sartori, 40 Bianchi...... 82.52

2 Emanual Cedrino, 60 Fiat	95.0336
3 Herbert Lytle, 50 Apperson	103.86
4 Louis Strang, 50 Isotta	102.38
5 F. W. Leland, 30 Stearns	90.72
6 E. H. Parker, 60 Fiat	05.00
7 Harry Michener, Lozier	86.59
8 Guy W. Vaughn, 30 Stearns	90.728
9 Ralph Mulford, Lozier	86.59
10 Dan Murphy, 35 Maja	58.92
11 Al Poole, 50 Isotta	102.38
12 Montague Roberts, 60 Thomas.	95.0334
13 Barney Oldfield, 30 Stearns	90.7 2 8
14 Maurice Bernin, 35-45 Renault	86.59
15 Geo. Robertson, 50 Panhard	103.864
16 Wm. H. Hilliard, 40 Hol-Tan	72.3 8
17 A. L. Campbell, 40-45 Allen-King	78.54
18 Julien Block, 35-45 Renault	86.59
19 Hugh N. Harding, 50 Isotta	102.38
20 Louis Bergdoll, 60 Benz	103.00
21 J. Seymour, 50 Simplex	103.83
22 Wm. Watson, 50 Simplex	103.83
This week has produced a hull m	arket in

This week has produced a bull market in Westchester county. Eggs and milk have risen in value, proportionate to the increase in rates for window seats in farm houses fronting the course, and it is said on good authority that Walter W. Law, who is giving the trophy that is to be raced for, has sent all his cows up into the back country and has staked his erstwhile pasture lots into pleasing sites for bungalows and country estates. He confidently expects the race will prove a profitable real estate booster and will draw bigger crowds than all the free Sunday excursions he could run in a year.

The task of oiling the course was completed early this week but that treatment has not rendered it less dangerous. Despite two or three minor messages here and there with a steam road roller there yet remains many bumps.

The course was officially measured this week and was found to be 32.6 miles in length instead of 30 miles, so that ten laps of the race will make 326 miles, instead of 300 miles. There has been some talk of reducing the distance to eight laps, but no official announcement to that effect has been made. As the Motor World has stated many times, it is doubtful if a more dangerous course could have been picked out than the Briarcliff course. It is somewhat straighter than a corkscrew, but not much. There is a variance as to the number of turns on its sinuous 30 miles. Louis Bergdoll (Benz) says he has counted 117 turns, while Frank Leland (Stearns) places the

The question naturally arises, will human endurance withstand such a strain as that necessary to cover ten laps of this dangerfraught course? Eliminating all chances of nerves becoming frazzled-and be it understood that every driver that goes into the race to-morrow morning will have plenty of need of all the nerve he can musterwill the drivers be able to withstand the physical strain? In practice not one of the 22 entrants has covered more than three laps at a time, and this has been agente enough to add to their weariness. It is conceded that there are at least 70 turns where gears will have to be shifted, and as each change requires two operations of the

6 arm, making at least 1,500 in all, it is a safe bet that the winner will not feel much like shaking hands after the finish.

In view of the dangerous nature of the course efforts are being made to insure a thorough ambulance service during the progress of the race. The course has been dotted with telephones not more than a mile apart, and a hospital corps of eight surgeons in that many automobiles equipped especially for the purpose, besides eight nurses, will be stationed at the most dangerous points on the course.

Just what point of the course offers the most chance for possibilities is difficult to determine. There is not one single stretch in the 30 miles circuit that can be described as a straight mile run, and the curves at certain points are more dangerous than the worst on any circuit over which an automobile race has ever been run, not even excepting the Ardennes circuit. One of the points where the drivers will be forced to slow down unless they care to risk their lives and all chances of winning the race is at the southern part of the oval near Valhalla. The turn here is more than a curve-it is a right angle, and one of the places the drivers refer to as "sporty." Another bad place is at Armonk, where there is a bend in the road in the form of a V and less than 30 yards in the entire length. The northern end of the circuit from Pine Bridge to Mount Kisco abounds possibly in unpleasant eventualities. The road is continuously serpentine, with rocks abutting dangerously near the track, with trees, telegraph poles, stone walls, and parapets threatening at every corner. At Mount Kisco there will be a control, the only one on the course, and drivers will have to take ten minutes to pass over about a half mile of road. Catds will be stamped upon entering and leaving, and these dropped in a locked box on the dashboard.

Three bad accidents already have occurred this week. On Tuesday morning J. B. Ryall, who was "feeling" the course in a runabout, in which were three persons, ran off the Saw Mill bridge near Eastview and plunged into the creek. Ryall sustained a compound fracture of the ankle of his already damaged left leg, and the passengers escaped with slight injuries. The following morning A. C. Campbell, driving the Allen-Kingston, ran off the bridge at Armonk. His jaw was broken and it is not thought he will be able to start. George Robertson (Panhard) ditched his car at Wampus Lake, but escaped with bruises.

How the promoters intend to keep the expected crowds from encroaching on the already too narrow course was made known this week. There will be about 1,000 notional guardsmen, "volunteered" from two New York regiments. It is stated that the "volunteers" will not carry State guns, but what they will carry, or with what real authority they will be vested is not made clear. It is stated also that these "volunteers" will cost the race promoters \$7,000.



OFF THE MAIN LINE

NEW YORK-PARIS "RACERS" AT SEA

Automobiles Race Across the Pacific on Steamships—Godard Gives up and Sells the Motobloc Car.

Three steamers—the Aki Maru, the Glen Logan and the Shawmut—are now engaged in the great trans-Pacific ocean race, the second stage of the New York-Paris automobile "race." The Aki Maru is due at Yokahama, Japan, on April 29, and the Shawmut on May 10. The Glen Logan, which goes directly to Vladivostok, is due at that port on May 9th. The Aki Maru left Seattle on April 14th, the Glen Logan on April 20th, and the Shawmut on April 21st, which is sufficient foreword to lead up to how the steamships get into an automobile "race" around the world.

When the Thomas car discovered that the Alaskan trails were impassible because of the melting snows, after having journeyed to Valdez, St. Chaffray, in charge of the De Dion car, then at Seattle, decided to take advantage of the information goty by the crew of the American car, so he hade all arrangements to embark forthwith on the Aki Maru for Yokahama. With him went the Zust car and a part of its crew. The latiturere not in favor of taking advantage of the American entrant in this manner, but as St. Chaffray was determined, there was nothing for the Italians to do but to keep the French car in sight, so they embarked also on the Aki Maru.

Schuester, with the Thomas car, expected to sail from Seattle on the Glen Logan, direct for Vladivostok, but on account of difficulty in having his Russian passports vised by a Russian consul, as there was none in Seattle, the nearest being at San Francisco, he had to wait over a day and take the Shawmut to Yokahama. The passports will be vised there. Lieutenant Koeppen, of the German Protos, which intends to continue as a non-contestant, was geing to accompany the Thomas, but on account of the delay to the latter, the German decided to take the first boat to Vladivostok and there await the American car.

Lieutenant Koeppen's decision was brought about by his own difficulty. At Chicago he had engaged R. C. Schneider to drive the car, but at Seattle Schneider decided to go back to the Windy City, leaving Koeppen alone. The lieutenant wired to Berlin for two mechanics and they will be shipped across the Siberian railroad to join the car at Vladivostok.

It is the intention of the French De Dion, Italian Zust and American Thomas cars to proceed across Japan from Yokahama to Tsuruga by road, and there ship to Vladivostok. The French and Italian cars will have a lead of about eleven days after arriving in Siberia, but it is understood that the Italian crew has been ordered to await

the American car and proceed with it across the Siberian frontier. This report is strengthened by the fact that Sirtori, driver of the Italian car, did not go with it on the Aki Maru, but remained in Seattle to arrange for the shipment of some parts. He sailed for Vladivostok on the Glen Logan, which is due to arrive there on May 9.

Charles Godard, who started from New York with the French Motobloc car in the great New York-Paris scramble, gave up the contest and shipped his car by rail to San Francisco, is in additional trouble. After Godard left New York word was received here that he was wanted by the Paris police on a charge of having obtained money under false pretenses during the Pekin-Paris "race" last year. When Godard reached San Francisco he sold the car and its outfit to a Nevada mining man for \$1,650, it is stated. According to advices from San Francisco Godard was about to depart for dear Paris, when he was arrested by customs officials. They wanted the Frenchman to explain why he sold the car without the formality of having taken it out of bond, as it had been accorded free entry to this country, upon the condition that it simply was going through. What the customs officials intend to do with Godard is not stated.

Motorist with a 100,000 Miles Record.

It is believed that the first full authenticated instance of a man piling up a record of 100,000 miles has been found in E. C. Andrews, of the Liberty Mills Co., Nashville, Tenn. This record was not made with one car, but a peculiar feature of the matter is that the registering of the mileage was done on one Warner Auto-Meter, which was changed from car to car as the seasons advanced. Another case, not so well authenticated, is a record of 75,000 miles made by a Chicago man, who, however, does not care to have his name mentioned as he is not positive whether or not he missed one repetition of his odometer. A Warner Auto-Meter is on his car also.

Omaha Dreams of an Automobile Track

At the suggestion of U. S. Renne, of Smithland, Iowa, whoever he may be, a majority of Omaha's dealers have signified their intention of contributing funds for the purpose of repairing the old mile track at the fairgrounds with the newly organized National Automobile Racing Association, about which little is known except that it has its offices in Cleveland. The "Nara" expects to create a circuit of tracks for automobile racing, and Omaha is on the list.

First Entry for Hower's "Blind Run."

J. W. Maguire, of Boston, has made the first entry for Chairman F. B. Hower's "blind run" for the Glidden trophy, which starts from Buffalo on July 9. Maguire entered a Pierce-Arrow, naming C. R. Teaboldt as the driver.

BY "WIRELESS" FROM WERNER

Lone New York-Paris "Racer," Long Lost,
Turns up in a Dream—Grapevine
News in French Paper.

How fast the little germ of news may propagate when left to itself in its travels over the world is difficult to realize until the return mail brings in the "revised version" of some story, long grown stale. This is particularly true where patriotic journalism and trade interests combine to stimulate the creation of a piece of intelligence as startling as, for instance, that the longforgotten Werner, which a New York newspaper despatched to Paris from Printinghouse square a day ahead of the "regular" New York-Paris "racers," and which crossed a good part of the continent on a railroad train, had now assumed the leading position and is at present braving the northern terrors of the Klondike on the course oroginally laid down for the main expedition.

For this statement the Parisian "l'Auto" is responsible. In its issue of April 2, an item appeared which was substantially as follows:

"The New York-Paris race has entered upon a thrilling phase to which the veritably epic progress of the French Werner has contributed no small amount of honor. The American journals, notably the World, state that Drieghe and Hohman, who are conducting it, have aroused for themselves and their car the admiration of the New York masses.

"This is easy to comprehend, for the formidable duel which this car has forced upon the American Thomas car has resulted to its advantage. The Thomas, as a matter of fact has already embarked from San Francisco to rejoin them at Seattle, while our compatriots have stuck to the course with a courage worthy of the knights of old. They maintain that the cars are made to run on land, and not to achieve their progress on the deck of a ship. Furthermore, you should see the enthusiasm which awaits them. Not simply have they reached Seattle-where a prize of 25,000 francs was offered-before the Thomas, but within the hour they have cabled that with the difficult passage of Alaska before it, the car of "John" (Thomas) renounced the over-passage of the Klondike and embarked directly for Vladivostok. The Werner did not hesitate to brave the course and remains alone at the head, more courageous and valiant than ever.

"This tickles our self-esteem all the more agreeably because the Americans are particularly interested in the Werner. Another advice states further that everywhere catalogs are in demand, and that their car is the object of examination which is not that of curiosity only, but of admiration."

PARK BOARD CLINGS TO POWER?

New York Commissioners Vote to Fight Against Enactment of the Automobile Bill Pending at Albany.

The New York State Automobile Association's bill introduced by Assemblyman Merritt, relating to highway control, now pending in the legislature at Albany, is to be opposed by the park commissioners of New York City. Commissioners Smith of Manhattan, Berry of the Bronx, and Kennedy of Brooklyn, held a conference on Friday, 17th inst., and adopted a resolution stating that the Park Board is opposed to the measure, which, if made a law, the commissioners say, will deprive them of the control of park highways, thereby permitting practically unlimited speed, the entrance to the parks of businness motor vehicles and the use of tire chains, which, they declare, tear up the macadam roads.

The commissioners say that since the enactment of a Park ordinance December 5, 1907, which prevented the further use of tire chains or other non-skidding devices in the parks and highways under their supervision, the automobilists have been awaiting a chance to get a bill through the Legislature which would take away the control the commissioners now have over the park highways. The corporation counsel will be requested to fight the bill.

The measure had been discussed in the Assembly at Albany on the previous Monday night and New York members joined with rural members in opposing it. The section of the bill which prohibits local authorities from enacting ordinances regulating the speed of automobiles was obnoxious to the New Yorkers, who made a plea for "home rule." Assemblyman Wagner said that it was a dangerous piece of legislation, and would give automobilists the right to run their machines at almost any rate of speed that seemed reasonable and proper. As a result of rural protests the bill was amended in committee on the 15th inst., so as to give rural communities the right to fix rates of speed in their respective precincts.

To further complicate the situation and despite the fact that the legislature is to adjourn next week, another automobile bill has been introduced in the lower house by Assemblyman Voss. This measure seeks to provide for the appointment by the Governor, of a commission of three persons to serve for five years with no compensation other than "their necessary traveling and other expenses." The commission may appoint a counsel at \$4,000 a year and a secretary at \$3,000. The bill further provides for registration certificates of vehicles on payment of \$3; the fee required in case of previous registration is to be \$2. Speed of 30 miles per hour may be maintained upon any public highway, but when approaching any bridge, dam, curve or descent it will be unlawful to exceed a rate of speed faster than 10 miles per hour. The bill includes provisions for warning of approach and for stopping on signal by a person in charge of a restive or frightened animal as long as shall be reasonably necessary to prevent accident and insure the safety of others.

When Charles Thaddeus Terry, counsel of the American Automobile Association, was questioned by a representative of the Motor World as to the possible result of the park board's opposition, he replied:

"The stand taken by the park board is too absurd to merit serious consideration. It is the stand they have taken before and been defeated in. All fair minded people, whether automobilists or not, realize how absolutely untenable the board's attitude is. If each little local organization throughout the State is to have the power to make laws and ordinances governing the traffic of their respective balliwicks, no man could drive fifty miles without violating a law, some law that he never heard of and couldn't easily find out about."

There was a tone of disgust in Mr. Terry's voice as he continued: "Two or three years ago, it will be remembered, the park board adopted a rule forbidding automobiles to use the parks at all. The public clamor that immediately arose compelled them to rescind their action. The legislature is familiar with the methods and ideas of the park board and I greatly doubt if their opposition in this matter will accomplish anything."

When his attention was called to the Voss bill Mr. Terry said that it was a negligible quantity, it had been introduced too late to be passed, and was fathered by some one or some organization at present undiscovered.

Whistles to Halt Motorists in Newark.

A new regulation concerning mounted policemen and automobilists has been put into effect by the Newark (N. J.) Police Board. It is worth memorizing, for a knowledge of it may save fines, and unnecessary police annoyance. Hereafter, instead of shouting at automobilists who they consider are going faster than the prescribed limits, the mounted policeman will use whistles. Automobilists are expected to stop or slow down their cars whenever they hear the signal.

Buffalo Adopts Drip Pan Ordinance.

The city of Buffalo has passed an ordinance requiring automobile owners to put drip pans on their automobiles. Owners whose automobiles drip oil on the streets are liable to a fine of \$50.

Minneapolis has a new automobile ordinance which includes a provision that automobiles shall not be kept standing on the business streets for a longer time that 20 minutes.

GOOD ROADS GOSPEL FOR GRANCERS

Automobile Club Offers Helpful Suggestions in a Booklet—The Damage that is Done by Water.

There are several ways of viewing the cause of good roads and several ways of treating the country-dwellers who chiefly are responsible for the well or ill conditioned state of the highways. To return hostility for their hostile or non-cimmital attitude is natural enough, but the friendly policy is better, especially where is is accompanied by direct tender of good advice and aid on the part of the motorists who always appreciate good roads, and who sometimes are held responsible to a certain extent for their destruction. This plan has been adopted by the Lima (Ohio) Automobile Club and a few helpful suggestions given to the farmers in a little brochure on road etiquette which is has issued.

"The most deadly enemy to good roads is water," is one of the points brought out. "Try and keep in mind this one fundamental thought, that water does more damage to roads than all other agencies put together. If it were not for water a road once good would always be good. Think about this every time you drive over a road. Speak about it to everybody you meet. Keep insisting that more attention be given to the subject of keeping water from standing in puddles along the road. It stands in pools only when there are holes for it to go into. No holes no water. No water. no mud. One shovelful of gravel will fill a small hole, and if all the small holes are kept filled, there will never be any large holes.

"You can fill a thousand small holes for what it will cost to fill ten large ones. In one case you will have a perfect road all the time. In the other case you never have a good one. It is either holes or fresh stone the year round. But after a road has been properly built it is an easy matter to keep it so by watching for the small depressions which always apppear in a new road, where little pools of water will accumulate after a rain. They look so very innocent and harmless at first; but the enemy-wateris there and at work. It softens the ground and along comes a loaded team and forces out the water and some dirt with it-just a little-but the depression is made a little deeper and will hold a little more water than before; and the big wagon comes along and again 'swishes' out more dirt with the water than it did the first time.

"Wherever a drain-tile has been laid across a road you will always find a raise or a hole, even though it has been in for two or three years. Everybody sees it and takes the 'jolt,' but nobody fixes it, although it might be done in ten minutes, simply because it is nobody's business."

GASOLENE VS. ALCOHOL AS FUEL

Experiments at Franklin Factory Result in Verdict for the Former—Relative Economy a Decisive Factor.

As the result of extensive experiments that have been carried on with the alcohol motor in the laboratories at the Franklin factory in Syracuse, N. Y., the Franklin people conclude that the results do not warrant the belief that there will be an immediate demand for the alcohol motor. They say their experiments show that even if alcohol and gasolene could be purchased at the same price per gallon, the gasolene motor would be the more economical. In other words, with the two fuels at the same price, it would be cheaper to use gasolene. This is because there is a great deal more energy in a given amount of gasolene than there is in a given amount of alcohol, and up to date there is no way known by which the handicap of an alcohol motor can be overcome.

There is another very serious drawback to the use of alcohol as against the use of gasolene, they say. The motor can use practically any amount and not suffer. In the gasolene motor the "mixture" must be right or the motor does not work well. If the gasolene is used too freely and the "mixture" becomes too rich the operator knows it at once by the loss of power, etc. This is not true with alcohol. For example: If the alcohol motor was running at the rate of three miles to one gallon of alcohol and some little change in the adjustment or conditions caused the alcohol to be fed faster, the motor might consume a gallon to a mile and the operator would not know it. Therefore, under all conditions known to-day the Franklin people conclude that there is no immediate future for the alcohol motor, but they do believe that it is of sufficient importance to merit further experimenting with the possibility that the problem of providing an available substitute for gasolene as fuel for the internal combustion motor can finally be solved.

Necessity for Ample Room for Testing.

When first testing the results of adjustments which have been made on the clutch or transmission it is advisable to have plenty of room for operation before connecting the transmission to the power plant. An incident recently occurred which emphasizes the importance of this precaution and which narrowly escaped a sensational climax.

A car equipped with a planetary transmission was given a thorough overhauling. The last thing to be adjusted was the transmission, and when this was done the engine was started and the mechanic, who had seated himself in the car, threw in the clutch. It held all right, but instead of

taking hold gradually and permitting the car to slowly overcome its inertia, the vehicle bounded forward with startling suddenness, and with disastrous results.

The test was made on the upper floor of the garage which was equipped as a machine shop. The car was standing directly in front of and only about three feet away from a drill press, and as it bounded forward it struck the latter with sufficient force to wreck it, at the same time destroying its own radiator, which received the full force of the impact. The mechanic was fortunate, however, in having the car stopped by the drill press, for that alone was between the car and a large window that extended from the ceiling to the floor. Had the press not been there the car would have gone through the window and dropped 20 feet to the ground. Obviously had this occurred the incident would have had a tragic ending. But the accident would have been avoided if the simple precaution of having plenty of room for testing had been

Selecting the Proper Spark Plug.

While the same principle is found in all spark plugs, it does not follow that all plugs are equally desirable for all motors. The selection of the style of plug which is best suited for a certain cylinder should depend almost entirely on the construction of the cylinder in which it is to be used. The best results will be obtained from a plug the firing points of which are well down in the explosion chamber.

As some motors are constructed with a large amount of metal in the cylinder head or an especially generous water jacket, it is obvious that plugs with short bases will not enter well into the explosion chamber. But as most manufacturers of spark plugs make a variety of designs it usually is possible to obtain the style wanted in whatever make of plug the consumer is best satisfied with.

Commutator Trouble and Its Remedy.

A source of trouble that is difficult to locate is sometimes found in the commutator. When the firing in a cylinder becomes erratic, the cause of it may lie in the condition of the springs behind the commutator brushes. After the brushes have been worn down by long usage it often will be discovered that the springs which are necessary to cause the contact between the brushes and the armature are not long enough to serve this purpose, with the result that a good contact is not made when the armature is revolving rapidly. Yet when a test is made with the engine not in motion the results are entirely satisfactorv.

No definite rule can be laid down that will show when this condition exists, but if all the other parts of the ignition apparatus are in order, time and trouble may be saved by lengthening the springs so that a firm contact is secured.

HARMLESSNESS OF BATTERY FLUID

Startling Ablutions in Presence of Supreme Court Convince Jurors—Verdict for Defendants in Damage Suit.

By plunging their hands in the dilute solution of sulphuric acid which is used in the batteries that drive motor cabs, and by rubbing that fluid upon their faces, William H. Palmer, Jr., secretary of the New York Transportation Co., and Mr. Wing, counsel for the company, disproved in the New York Supreme Court a few days ago, the general impression that battery fluid is strong enough to burn and disfigure the human body.

This somewhat spectacular demonstration was made during the trial of a damage suit brought against the New York Transportation Co. by a boy who had been caught in a collision between a street car and one of the company's electric cabs. The force of the collision had knocked the batteries from the cab and broke them. The boy's lawyer claimed that his client had been knocked down and had rolled in the puddle of electrolyte fluid which had formed after the breaking of the batteries. He claimed, further, that the electrolyte had burned the boy so severely on the head and face that the burns had not healed for six months after the accident occurred.

As soon as this allegation was made, both Mr. Wing and Mr. Palmer jumped to their feet and volunteered to wash their hands in the same kind of acid which the plaintiff's lawyer claimed had burned the boy. They also agreed to have it rubbed on their faces. The boy's lawyer dared them to carry out the proposed demonstration, and with a readiness that probably was wholly unexpected by the challenger they accepted his challenge.

With the consent of the judge, a battery of the same type used on the electric vehicle which had been in the collision was then brought in the court room, and the acid emptied from it into a basin.

Mr. Wing and Mr. Palmer then washed their hands in the electrolyte fluid and rubbed a generous quantity of it on their faces. Mr. Wing, to further prove the harmlessness of the fluid, actually swallowed some of it.

The jury was apparently so well satisfied with this demonstration of the inability of electrolyte to inflict the injuries which the plaintiff's lawyer alleged that it brought in a verdict for the company after being out only fifteen minutes.

It was brought out in court that electrolyte is a dilute solution of sulphuric acid in water, and is perfectly harmless so far as any burning effect upon the human body is concerned, unless copious quantities of it be permitted to remain upon the body for a considerable length of time.

EXPENSES OF COMMERCIAL CARS

Comparative Statistics of Operating Cost in Scheduled Service—Their Bearing on Systems of Propulsion.

In this country the operation of motor vehicles for commercial purposes has been carried on in such a desultory fashion up to this time that but little is known of the proper average working costs as credited to the finer subdivisions of the sum total. In England and on the Continent, on the other hand, three or four years of continuous operation of omnibuses and trucks by companies handling relatively large numbers of these vehicles, has furnished a broad basis of cost accounting and cost comparison, which is of the greatest value to those who have access to them.

According to good authority, the outcome of a prolonged and careful study of such statistics has led to the disheartening conclusion that the systems of propulsion in present use are, for the most part of too expensive a sort to be worked with proper economy. In other words, according to this opinion, "It is necessary that an entirely different type of vehicle to those now most generally used must be introduced," in order to secure the proper ratio of net earning to investment.

This opinion-and in the light of the conclusions offered it cannot be regarded otherwise-formed the gist of a paper on the "development of petrol-electric systems and their application to heavy road vehicles," read before the Society of Road Traction Engineers, recently by P. Frost-Smith and W. A. Stevens. Though bearing directly on the use of the "mixed" system of propulsion, or the electric transmission, as it is more aptly termed, the treatment of the subject has a general bearing on the use of commercial vehicles in scheduled service in England, which is of no little interest from the statistical point of view.

Referring to the results of long-continued observation the authors remark that "the general cost of running is much too high, . . . and this high cost of operation is due to several causes, including abuse of the vehicle by reason of bad driving and carelessness, and the necessity for a very heavy night staff—about 1.5 men per vehicle, excluding washers. The only items in which economy can be effected in motor 'bus operation are: depreciation, running costs, maintenance costs, oil and grease."

The costs per mile quoted are derived from the experience of the company with which the authors are connected, and are claimed to be representative of average London practice. "They relate," it is explained, "to vehicles which have been in apperation for nearly 3 years, and they there-

THE MOTOR WORLD

fore give a fair indication of the maintenance necessary after the first year's working." The figures are given in American equivalents:

Day running	0.54
Night running	1.52
Maintenance	4.96
Lubricants	0.49
Grease	0.16
Paraffin (kerosene)	0.08
Vehicle lighting	0.21
Body upkeep	0.51
Drivers	2.66
Tires	3.55
Conductors	1.92
Petrol (gasolene)	2.69
Traffic expenses	0.52
Depreciation, insurance, rents, taxes,	0.0-
water, gas, garage lighting, super-	
vision and establishment charges	4.43
vision and establishment charges	

24.24

"The petrol-electric problem has, for some years past, received much attention and careful consideration," the authors continue, "and many designers' names here deserve mention, viz., Patten, of America, in 1890; the Germain system in Belgium; the Hart direct-current system, in 1903; the Fischer, in America; the Lohner-Porsche, in Austria; the Stevens double-ended motor; the Carolan; the Krieger, Pieper, Farrow, Mercedes-Simplex, Kuttner, Lehwess and Clark, British Thompson-Houston. Greenwood and Batley, and last, but not least, the Hart and Durtnall, all of which types differ considerably in their application and other details, to the system in which we are interested.

"We can only deal generally, and briefly with the foregoing systems, which are broadly divided under three headings, viz., the accumulator system, the direct-current system, and the alternating-current system. The prospects, we think, are of the worst for those interested in the accumulator 'system, by which we mean a motor or motors driven from a storage battery which is carried upon the vehicle. Traction battery sets have never yet met with success, and it is only necessary to look into the records of the Blackpool Tramways Co., the Birmingham Central Tramways Co., the London Motor Cab Co., and early American efforts in this direction, to condemn the system. Accumulators of the Planté type were as efficient 15 years ago as they are to-day, and the only improvements shown are in mechanical details. We are of opinion that for the systems which employ a direct current unit, in conjunction with secondary batteries, the prospects are also bad, chiefly on account of the heavy wear and tear on the battery. As regards the purely petrolelectric combination, we are of opinion that the electric unit applied heretofore, by a double reduction gear, or by single motor on to a live axle, or to replace only the gear box, and used only as a starter, does not warrant its existence. The Mercedes-Simplex system, which is a direct application of electric motors, built into the road wheels, appears to us to be entirely wrong owing to the very low speed, the limited size of the motors, and the necessarily low efficiency. We have mentioned the Mercedes-Simplex system last, as the object they aim at is in our opinion, the correct one, viz., the direct application of the electric motors to the road wheels, but still, this must be done in a manner that shall be mechanical and efficient; this we have endeavored to do, and we hope successfully."

The Hallford system, which is discussed at some length in the text, was described in these columns not long ago. Its most striking feature from the purely mechanical point of view, is the method of mounting the motors, of which there are two, which consists in hanging them upon the outside of the frame at either side of the vehicle, and driving the rear wheels independently through special cardan shaft and bevel gear groups. Speed control of the vehicle is accomplished mainly by altering the excitation of the dynamo, so that variations in traction are secured with a minimum waste of energy.

This system has proved conducive to a number of economies, of which the paper continues:

"An engine such as we have employed may be safely taken to cost no more than 1/4d. (1/2 cent) per mile, on the very low basis of 30,000 miles run per annum; this mileage is more likely to approach 40,000 miles than the figure given, and at the time of writing this paper the engine has cost nothing.

"On the same basis as the above the frame is estimated to cost 1/4d., and the back axle the same sum. This latter unit was stripped after a 6,000 mile run, for examination, and we wish you to accept our assurance that there was no visible signs of wear. Gears, ball bearings, and other wearing parts were perfect, and the only anxiety we have regarding this unit is the possible carelessness, or want of attention, on the part of the management, or other employes. The electrical unit has shown us that with a suitably designed dynamo and motors, the maintenance cost would be extremely low, and certainly not more than 1/4 d. per mile, though we really think that this figure, low as it is, would eventually be considerably reduced."

The saving possible with a vehicle of this description is revealed by the following table, which is quoted in American coin:

Cen	its. Cents.
Depreciation, insurance, etc 4.4	13 3.66
Day and night running charges. 2.0	0.69
Maintenance 4.9	2.03
Lubricating oil 0.4	9 0.12
Grease 0.1	
Paraffin (kerosene) 0.0	
Other items (same as now)12.0	

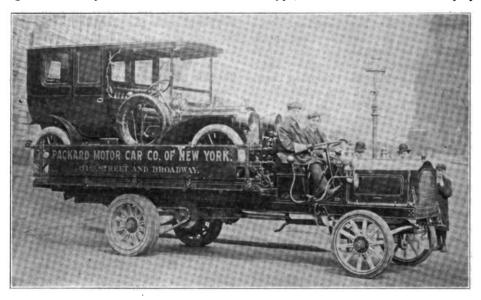
PACKARD IDEAS IN A NEW TRUCK

Approved Features of Touring Car Construction Adapted to Heavy Vehicles
—Simple Details of the Chassis.

Although it is admittedly "bad practice" to utilize parts intended for use in pleasure cars in vehicles answering to purely commercial requirements, there is a world of good sense in applying the ideas which have been worked out successfully in one class of machines, to those of the other sort so long as they are properly adapted. Thus in the new Packard three-ton truck, which is being introduced by the Packard Motor Car

pounds, is geared to run at speeds up to 12 miles an hour. It has 144-inch wheel base; 68-inch tread; wheels, 34 and 36 inches in diameter, front and rear, shod with solid tires, which are single in front, and twin in the rear. Semi-elliptical springs are used—45 and 50 inches long, respectively, and or massive form. The main frame is 39 inches in width and 148 inches long back of the driver's seat. It is built up of channel steel with cold riveted joints.

The motor, which is located under a shapely bonnet in front of the seat, is of the quadruple, vertical pattern, with cylinders cast in pairs and with water jackets integral. Its dimensions are 4½ by 5 inches, bore and stroke. The regular Packard type, automatic carburetter is employed,



PACKARD THREE-TON TRUCK

Co., Detroit, Mich., a form of counter shaft is employed which closely parallels the rear axle "bridge" construction combined with the change gear arrangement, which has for so long been a marked and approved feature of Packard touring car construction. This form is carried out even to the extent of taking up the driving resistances by means of a long torque rod, instead of by the lugs supporting the gear box, as is more commonly done under similar conditions.

The details of the machine have been worked out with great care and show the effect of the long period of incubation which has preluded its introduction. Its general arrangement is characteristically simple and in accordance with current practice, many of the refinements not ordinarily found in commercial vehicles being apparent in its make-up. The loading platform is 6 feet by 12 feet 4 inches, thus giving 74 square feet net of useful space back of the driver's seat. The floor is 411/2 inches above the ground, and in the standard construction is supplied with a regular crib body. Other types of body are equally applicable, however, and are obtainable on special requisition.

The chassis, which weighs about 5.000

and governed automatically. Ignition is by jump spark, furnished by the Eisemann magneto, gear driven, supplemented by storage batteries for reserve and starting purposes.

Transmission is by propeller shaft from the expanding ring clutch to the three speed sliding change gear, and from the counter shaft to the wheels, by side chains. The foot brakes are applied on large drums located on the counter shaft ends, just inside the driving sprockets, while the emergency set acts on the wheels themselves through internal drums. The mechanism of control comprises the usual pedal and lever appliances, and is handily placed on the right side of the vehicle.

Parcels Delivery Experiment in Mexico.

What is considered a significant beginning in the exploitation of the commercial motor vehicle in Mexico was inaugurated the first of this month, when the Mexican Railroad undertook a series of trials to determine the relative costs of parcels delivery by motor and animal traction. The initial equipment consists of a single 22 horsepower British built machine, imported for the purpose.

GAS PRODUCER FOR MOTOR CARS

Practical Experiment in Fuel Production for Heavy Vehicles—Specifications of a Recent Foreign Device.

What used to be regarded as a more or less remote possibility in connection with motor propulsion, has been brought into a state of tangible reality by a Scotch firm which has developed a form of gas producer suitable for use on motor vehicles of the heavier class. While the direct utilization of producer gas in motors of the internal combustion type is known to be more economical than the use of liquid fuels, the stumbling block has always been the cumbersome nature of the producer itself, which in point of bulk and weight tended to parallel the ordinary steam boiler. The special type of producer which has been developed by the firm in question, the Automobile Gas Producer Syndicate, of Glasgow, is surprisingly light and compact, and as applied to a machine of the char-abanc type, equivalent to the American "rubber-neck wagon," has proved even more satisfactory than had been expected at the outset.

According to the Scientific American, in which an account of the trials recently appeared, the vehicle closely resembles the sight seeing and transfer machines which are extensively used in Great Britain at the present time. The motor is of the ordinary gasolene type, and develops 40 horsepower when run on gasolene, and 30 when run on producer gas. It is placed in the usual forward position underneath the bonnet and is unaltered except that the compression is raised to 115 pounds. The normal running speed is 900 revolutions per minute, and transmission to the rear driving wheels is by the ordinary form of change speed gear and double side chains.

"The gas producer is placed immediately behind the engine, between the latter and the dashboard," says the authority mentioned. "It extends the full width of the chassis, and is about 18 inches deep, while it extends from just below the top level of the dashboard to within about 12 inches of the ground. The grate area is about 12 square inches, and the fuel rests on a specially designed grid, upon which the water is sprayed in the center through a four-spray nozzle.

"On a level with the fuel grid is a small air-tight door secured in position by means of a crossbar and clamping screw, by means of which the fire is lighted and the clinker and ash removed. The upper part of the producer, which forms practically an integral part thereof, is occupied by the fuel hopper. This is charged through small openings in the top rendered air tight by means of special cone joints, it only being necessary to open these once a day—in the

morning before starting out-since a single charge is sufficient for a full day's work. The air blast is forced into the bottom of the producer by means of a powerful rotary blower driven by chain from the engine shaft, while it is also fitted with a handoperating device for the purpose of setting the fire going after lighting. In order to control the generation of the gas, as well as to reduce the temperature and dispense with the steam jet that is generally utilized in such plants for this purpose, variation in the quantity of fine pulverized water fed through the nozzle mentioned above is effected by a special pump. This is accomplished by an ingenious arrangement. There is a novel rotary plunger pump fitted and driven from the engine by a lay shaft, by which the water is forced from the tank into the center of the fire. This pump works automatically and has the most delicate adjustment, so that the temperature of the fire and the extent of the gasification is carried out according to the requirements of the engine independently of the driver, the pump practically fulfilling the function of a governor.

"From the producer bottom the gas escapes into a pipe conveying it downward through the hopper to a coke scrubber suspended beneath the frame of the vehicle; thence it passes through a second pipe into the mixing chamber, where it is mixed with thé right proportion of air for combustion, the entry of the air being controlled through adjustable cocks, one of which is carried to the dashboard, so that the driver can supplement or decrease the air supply for this purpose. Thence the mixture passes to the throttle valve, controlled from the steering column, from which it is induced into the combustion heads of the engine cylinders through the inlet valves.'

The vehicle is controlled in the ordinary manner, the generation of gas being carried on automatically except for the injection of water into the producer, which is regulated by a small hand lever mounted on the steering column beside the spark and throttle levers. The hopper has a capacity for 640 pounds of fuel, and the fire is started with about 3 pounds of charcoal. Within 5 minutes of the time of starting the fire, the car is ready to use and thereafter no further attention need be given the producer.

After a year's use, the vehicle was recently subjected to a series of exhaustive tests to determine its economy and study the possibility of improving certain details of construction. In these trials, anthracite "pearls" were substituted for the coke, which had been the fuel originally intended, and with perfectly satisfactory results.

"The distance covered upon the latest of these tests," to continue the quotation, "was 40 miles, at an average speed of from 10 to 11 miles per hour. For the run 145 pounds of fuel were used, the vehicle weighing with its passengers 4.9 tons. This represents a fuel consumption of approximate-

ly 0.74 pound of anthracite per ton mile. The coal cost \$3.54 per ton, so that the fuel running costs represented about 0.12 cents per ton mile, or about 24 cents for the 40-mile journey.

"The same vehicle working under precisely similar conditions with gasolene fuel cost about 1.34 cents per ton mile, the spirit at the time costing 28 cents per gallon. Under these circumstances it will be realized that running expenses with producer gas are considerably lower than with gasolene. in this instance a saving of 1.22 cents per ton-mile being effected. It must be pointed out, moreover, that the working conditions were not the most favorable to economical efficiency, since no modification was made in the movement or diameter of the inlet valves, which were of the type usually adopted in general motor practice. More satisfactory and economical consumption results would be available were the valves mechanically operated, and with about twice the inlet area to the explosion chamber. At the same time the results have been sufficiently conclusive to prove the suitability of the system to all-round automobile work, and various vehicles of this type are now in course of construction."

Gun to Indicate Deflation of Tire.

Of all devices ever invented for the purpose of warning the automobile driver of the presence of a deflated tire, none, perhaps exceeds in point of simple ingenuity the contrivance recently placed on the French market by Loitard Freres, a Parisian firm. Briefly it is nothing more nor less than a tiny alarm gun affixed to the rim of the wheel, and arranged to be fired automatically when the tire pressure falls below a certain predetermined amount.

A tube, not unlike the filling tube, is mounted in the rim, and carries at its outer end a small metallic cartridge held in place by means of a screw cap. A small chamber just back of this contains the firing pin, which is spring actuated, and held in the "cocked" position by an extension in the form of a slotted tube, which engages a groove in the edge of the rim, where it is clamped in place by a small plug mounted on a butterfly flap, similar to those carried by the ordinary security bolts. So soon as the tire pressure falls to the danger point. the force holding the plug in place is relaxed sufficiently to release the firing pin and explode the powder charge contained in the cartridge, thus giving effective warning of the deflation.

Steering Gear at Top of Control Column.

To all intents and purposes there should be no advantage in placing the steering gear at the head of the control column instead of at the foot as is customarily done. The designer of the Critchley Norris steam car—a British product—however, has found several points in favor of the arrangement which has been incorporated on these machines in a particularly novel manner. The gear itself is of the worm and nut type. the slide which is threaded internally to receive the steering post, being mounted in the housing of the column directly beneath the wheel. Attached to it by means of a gudgeon pin is a long connecting link, extending through to the base of the column and there attached to one arm of a bell-crank lever, the other extremity of which is linked to the right hand steering knuckle by means of the usual drag link. The most striking feature of the system is that the entire gear may be dismounted without disturbing the dash or its supports in any way and even without dismounting the column.

Making Putty Hold in Body Finish.

At first thought it would appear quite as easy to putty the surface of a motor car body and make the plastic material stay in place as it is to perform the same service for the ordinary carriage. Such is not the case however, and the problem is a far more difficult one than would appear to be the case.

"Vehicle painters," remarked a practical member of the craft, "have long recognized the difficulty of making putty stay securely in place upon surfaces exposed to severe forms of vibration, and they resort to various expedients to circumvent the dislodeing power of the oscillation and vibration incident to the use of such surfaces. As a rule, the automobile is subjected to a service that tries the surface at all points, and to an extent foreign to the service of horsepropelled vehicles. To make the putty stay in place better upon such surfaces is the painter's burden to-day. Not a few workmen have succeeded in overcoming the difficulty in using a little raw linseed oil, say, a gill to four pounds of putty, in the putty as it is mixed. This serves to impart additional binding power to the putty, and, given a little extra time in which to dry, the pigment is pretty certain to hold."

Suspension with Cushioned Springs.

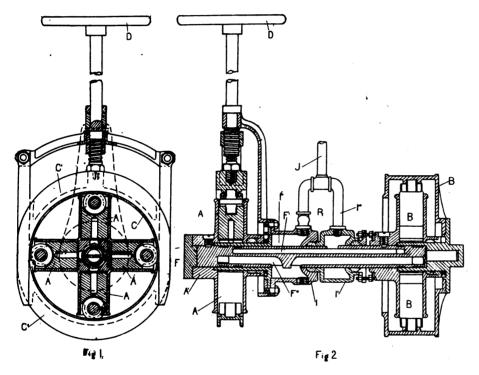
Under the name of the Simplex shock absorber, a British firm has just introduced a system of suspension which follows remarkably close in the footsteps of an Amerilan invention of several years ago, in which the springs were supported on pneumatic cushions fixed to the axle perches. In the Simplex system the springs are seated on a rectangular, gun-metal box which has a loosely fitting bottom or piston. carried by the axle and fixed rigidly in place. Between the piston and the shell of the box is a rubber bag of substantially the same section and contour, which is inflated to a pressure of some 10 to 15 pounds. Unlike the device, referred to, however, this arrangement is not intended to eliminate the use of inflated tires, but merely serves the purpose of relieving the springs themselves of the minor shocks and vibration of the vehicle. In this sense, it acts as a shock absorber, literally, and supplements the action of the tires.

HYDRAULIC CLUTCH DEVELOPMENT

Two Novel Methods of Attack—How the Same Result May be Attained in Various Ways.

Despite a number of very attractive features, the hydraulic clutch still remains largely a matter of prospect. Numerous different patterns have been designed, and from time to time no small amount of attention has been called to the subject, particularly in the columns of the foreign press. Nevertheless, up to this time no type of hydraulic transmission, either clutch pure and simple, or clutch and

The details of construction of the Hele-Shaw clutch are shown in Figs. 1 and 2 accompanying. As is apparent, the small plungers, A', in the cylinders, A, are arranged to travel back and forth along the diameters of the clutch, and are constrained in their motion by the guide ring, C, against the inside of which small rollers mounted on the outer ends of the plungers bear. The guide ring is composed of two semi-circular yokes with tangential extensions, which may be moved together or apart by means of the controller, D. As this is turned, the screw and nut mechanism above the clutch proper causes the voke C' to move up and the yoke C" to move down, or vice versa, the effect being to transform the yoke into an ellipse of varying length, according to



change speed gear, has been developed to a point where the public has had opportunity to test its qualities. At the same time, a great amount of labor is being expended in working out the system, which is too important to be overlooked.

One of the most recent developments of this class is the invention of Professor Hele-Shaw, whose multiple-disc clutch is famous as the prototype of its class. It is built on the plunger principle, that is to say, both driving and driven elements are composed of batteries of four small cylinders, arranged radially about the common axis of the clutch and carrying plungers from one to the other series of which motion is transmitted by the working fluid. Variations in the driving ratio from one to zero up to one to one, are obtained by varying the length of stroke of the plungers in the driving member. Furthermore, as this variation may be made smoothly and through stages of any desired length, it follows that the speed control of the vehicle may be as even and gradual as is desired.

the position of the controller. When the yoke is in the position shown in the illustration, the path of the rollers is perfectly circular, and therefore, if the shaft on which the cylinders, A, are mounted is caused to revolve, the plungers will not move, but will be held stationary. In the other extreme positions of the yokes, the plungers will be given their full travel, and will make four strokes per revolution.

The plungers B', in the driven group, shown in Fig. 2, are similarly arranged, but the rollors mounted on their plungers are constrained to run upon a path in the driven drum, B, which is permanently elliptical. Connecting the first and second groups of cylinders are a series of passages formed in the hollow driving shaft through which the working fluid is passed back and forth. From the plungers A, it is sent through the port F'', direct to the driven cylinders, to which it is admitted through ports in a rotary valve made integral with the part B. It is afterward returned through the low pressure port F' to the driving cylinders

again, thus completing its circuit. Two chambers are provided in the surrounding casings, I, I', the first, leading from the high pressure side of the system through a safety valve, R, to the supply reservoir, J, while the second is in communication with the same source through the pipe, I"'.

In action, with the driving pistons constrained to remain at the heads of their respective cylinders, as shown in Fig. 1, the system will be completely filled with a solid column of liquid, which, being incompressible, constrains the parts comprising the two groups of pistons to rotate together. When power is applied at the point, F, this constitutes a "direct drive" up to the point where the secondary pistons make contact with the track in the drum, B. This path being elliptical, and the driven pistons being immovable, it follows that the drum, B, and so the secondary shaft of the transmission, will also be driven at the same rate of speed as the primary. By varying the position of the yokes, C'-C", the driving pistons are given a greater or less amount of travel, thus permitting the liquid to circulate and give a corresponding motion to the secondary pistons, thus retarding the speed of the driven shaft, up to the point of full stroke in the driving group, when the circulation of liquid is so rapid as to permit the secondary shaft to remain absolutely idle.

Another recent device, which is interesting in this connection as typifying the rotary type of clutch movement as distinguished from the reciprocating, is that shown in Figs. 3 and 4, which illustrate the design of William Watson, another British engineer. In this, the principle employed is that of the vane pump, the driving and drivtn elements again being quite independent of one another, though very compactly arranged.

Referring to Fig. 3, A, is the driving shaft, B, a sleeve surrounding it, and D, three sliding keys which work against as many projections, E. At F are three cam surfaces, which work against the blades, G, which, in turn, slide in channels formed in the driving element, and are held outward normally by springs. Fixed to the sliding keys, is a collar, K, (Fig. 4), which is grooved to receive a piece, M, actuated from the outside by the rod, N, when it is desired to alter the control of the device. Working the rod, moves the collar, K, and, by moving the sliding keys, D, by engaging the projections. E, rotates the sleeve. B, sufficiently to cause the cam fingers, F, to withdraw the blades, G, into the boss of the driving member. This causes the release of the clutch and renders the device idle

The driven element consists of the annular casing, O, which is provided with a couple of grooves carrying the blades, Q, held outwardly by springs. The two pressure ports, S, lead from the annular space, U, between the driving and driven elements, to the space oueside the drum, O, while T,

are the exhaust ports, leading around to the intake side of the driving element through ports in the ends of the casing. The outer casing, containing the last mentioned transfer ports, provides a series of smaller ports, 3, which serve to throttle the flow of liquid, and retard the circulation to any degree necessary.

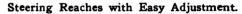
Within the outer casing are placed three blocks, W, the inner surfaces of which are of the same radius as the driven element, O, and which are moveable radially through the mechanism, X, controlled by the shaft, 10, to vary the area of the annular space between the blocks and the driven element. It will be observed that the inner space, U, is divided into two sections by abutments, and the outer into

In all hydraulic clutches the gradation of speed is accomplished without interrupting the drive and without resorting to determinate "speeds." The control which this furnishes is so ideal in its nature that it is remarkable no more rapid progress is being made in developing the principle.

Block to Aid in Repair of Chains.

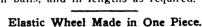
It is one of the simplest matters in the world to describe how readily a driving chain may be repaired at the roadside merely by cutting out a faulty link or two and replacing them by new ones which always are ready to hand in the tool kit. But drivers who have tried to follow directions in this respect have learned to their sorrow that owing to the great degree of hardness

kilometres or 1,300 miles in round numbers. with a two-day exhibition at Nice, and a one-day exhibition at Paris in conclusion. The daily schedules averaged from 200 to 326 kilometres per day (124 to 200 miles), and extended over eight days. The entrants were divided into five classifications, rated according to weight and cylinder bore, with a distinction according to the number of cylinders. Each class was further subdivided into two sections in which repairs to wheels or tires might or might not be effected during the trip, according to stipulation made in the entry blanks. A curious reflection on the unstable character of the resilient wheel propaganda appears in the fact that there were just twice as many entrants as starters.



Typical of the care with which the modern steering reaches and connections are worked out, is the method of adjustment found in the new set of connections which has just been brought out by the Long Arm System Co., Cleveland, O. Instead of employing a very fine thread on the plugs which hold the outer sockets in place, a relatively coarse thread is used, which, when tightly fitted, is much less subject to wear than is the case with a finer pitch. To facilitate adjustment, the plug is provided with three intersecting cotter pin slots across the outer end, while the shell of the bearing is drilled with two holes for the pin, placed at right angles to one another. By this means an adjustment of 1-12 turn, or 1-144 inch may be obtained, so that a proper working tension may be maintained at all times without difficulty.

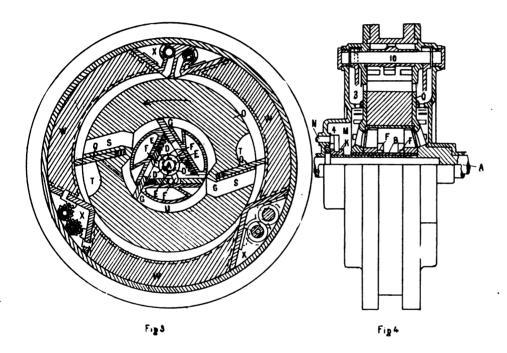
The design also provides for hardened sockets, japanned, and therefore rustless springs, and heavy wrought iron piping for the body of the reach. The parts are supplied in sizes suitable for 1, 11%, and 114 inch balls, and in lengths as required.



Almost everything in the way of an elastic wheel has been proposed before now, but the very latest idea in this line contemplates the perfectly novel use of a wheel made in one entire piece from "rubber, gutta-percha, or other elastic material," which is an innovation to which the Far East has lately given birth. The scheme has been made the subject of patent grants in the State of Perak, of the Federated Malay States, and is the invention of the manager of a local gutta-percha company.

Motor Cars for Factory Employes.

Motor vans for transporting factory hands between their homes and the shops where they are employed, constitute an unwontedly humanitarian innovation which is about to take place in the neighborhood of Moscow. Count Scheremetzew, who owns several sugar factories in that vicinity has just ordered three German motor vehicles which are to be used for this purpose.



three by the guides which locate the position of the sliding blocks, W.

As the driving element is turned in the direction of the arrow, the blades in the driving member force the liquid out through the pressure ports, S, into the outer space, the pressure thus formed reacting against the abutments in the outer casing and serving to drive the blades, Q, in the same direction. The part O, being coupled to the driven shaft of the transmission, the connection is thus established through the system.

In order to increase the speed of the driven member, the blocks W, are brought inward by means of the gearing, so that the area of the outer annular passage is reduced. This, in turn, increases the velocity of flow in the liquid, and so increases the speed of the driven part, O, up to the maximum speed, when the blocks are in contact with the driven member, O, and the outer passage has entirely vanished. At this point, the parts become locked together and the entire mechanism revolves as a single part.

of the parts this simple little task proves to be a most provoking one to undertake. This is particularly true of roller chains.

The introduction of the Diamond Repair Block, which has just been placed on the market by the Diamond Chain & Mfg. Co., Akron, O., however, promises to put an end to all difficulties of the sort. In order to remove a link, it is merely necessary to place the chain in the block, slip on the top piece, give the rivet heads a few light taps with a hammer and lift off the side plate. The repair link may then be inserted and the entire task completed in a wonderfully brief space of time, all things considered. If it is desired to use the old link again, all that is required is to head over the rivets once more.

Annual French Test of Elastic Wheels.

Twenty-one contestants figured in the annual spring and elastic wheel and tire competition, which commenced on Tuesday, 7th inst., in Paris, under the auspices of one of the sporting dailies. The trial consisted of a run to Nice and return, totalling 2,100



ROADSTER FOR THE SUBURBANITE

New Studebaker Model with Compromise

Body of Original Design—Its Neat

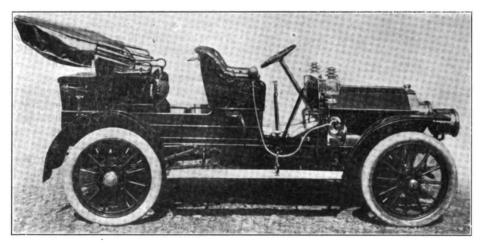
Feature of Adaptability.

As the average automobile owner is gaining in his appreciation of the motor car as a useful accessory to his daily life, the designer is gradually changing his plans with an eye to developing the widest possible utility in the product. This tendency is manifested in numerous instances among the new cars of this season, nowhere, perhaps, to better advantage than in the case of the new Studebaker Suburban Roadster. In common with a large number of ma-

or commercial van, which, though primarily intended only for tradesmen, is frequently required by the private owner for purely temporary uses.

Lubricating Gear Boxes and Axle Cases.

Owners are gradually learning to consult the maker, or agent, when purchasing a new car, in order to learn just how much oil is required in the crank case in order to secure proper lubrication, but they are slower in learning that it is almost, if not quite as important, that the proper quality and the proper amounts of lubricant be used in the gear box and live axle casing. Particularly in the case of the axle, it is important that lubrication should be plentiful and of the right sort, as the action of the differential involves great tendency to heating unless



STUDEBAKER SUBURBAN ROADSTER

chines of the runabout class, this machine has interchangeable rear seats, accommodating either one or two passengers, as the case may be, and readily demountable. Unlike the average, however, the removal of the seats leaves, not a flat or sloping deck, but a box body, suitable for carrying luggage or other light loads, and correspondingly convenient.

The accompanying picture gives a good idea of the appearance of the car, the equipment shown including the two-passenger rear seat, luggage rack behind, and cape top which may be raised to cover the entire vehicle. The body itself, follows the principle of the conventionalized Beverly wagon, which has been so popular among users of horse-drawn vehicles, and which comprises a moderately high box back of the front seat, set off in straight line panels. When the rear seat is removed, the tray or box is left open and perfectly free for haulage purposes.

The chassis is the regular model employed on all Studebaker cars this year, equipped with a 30 horsepower motor and sliding gear, shaft drive, transmission. The body may be used interchangeably with others, if required, and is intended to fill in the gap between the full blown touring car, which is fitted to replace, and the luggage

proper measures are taken to prevent it. When there is any doubt as to the proper quantity of oil to use, it is well to put in sufficient to work out under the brake drums at the end of the axle, afterward drawing it off a little at a time until this indication of a surplus is no longer apparent.

When cleaning out gear boxes and live axle casings, the quickest method of removing the oil and grease is to pour in a liberal quantity of kerosene oil, after draining off all lubricant that will flow, and then to jack up the rear end of the car and run the motor for a few moments, changing gear from time to time, so as to bring all the gears into play. After draining off the thickened solution which is thus formed, replace the drain plugs and pour in more kerosene, when the remnants of hardened grease may be loosened with an old paint brush, with which all the corners should be searched out. After draining a third time, new lubricant may be put in with good assurance that it will not be fouled with old oil or dirt. Such a cleaning requires only a comparatively small amount of time and labor, and should be resorted to at least two or three times a season. The fact that the gears will "run" by no means proves they do not require attention.

VARIED USES OF THE MANOMETER

Not Restricted to Its Ordinary Purpose— Conditions that may be Determined by Its Readings.

Though a considerable number of cars are equipped with manometers, or gauges indicating the pressure in the cooling system, it is safe to assume that only a comparatively limited number of users understand their full purpose, or know they are useful in a number of ways outside the very apparent one of indicating whether the pump is working or not. That their use may be extended considerably by gaining a thorough acquaintance with its working, must be apparent, however, on a moment's thought.

Primarily a pressure gauge, and as such, showing only, how much pressure exists in the piping of the cooling system, it is evident that fluctuations in its reading may be caused by one of four conditions. That is to say, the reading will vary as the engine speed, and so the speed of the pump varies; as the pressure in the system rises in response to stoppage of the flow at some point, the generation of steam in excessive amounts, or the breakage of a connection permitting sudden leakage; or as the speed of the pump falls off in the event of a fault in the driving connection.

Ordinarily, the indication of the needle furnishes an exact record of the speed of the crank shaft, and were the dial so graduated, would serve the purpose of a speed indicator perfectly well. Were the drive always in the same ratio, it would also serve as a speed indicator for the vehicle itself and record equally as well its rate of travel. The use of the change speed gear prevents this, ordinarily, but by the same token, the manometer serves a useful purpose in revealing the need of changing gears when road conditions become altered in any way. Thus, the motor invariably does its most effective work within a rather narrow speed range. If this is known, any dropping below that speed, may be taken as an indication that the motor is overloaded, and that, if suitable manipulation of spark and throttle levers fail to bring up the speed of the crank shaft, a lower gear should be resorted to in order to secure the smoothest possible running. In the same way, any undue "racing" of the engine, may be taken to indicate that a higher gear may be employed to advantage.

The experienced driver commonly relies on the sound of the exhaust or the beat of the valve gear to judge his handling of the motor, but with the silent operation of the modern car, it is not always possible to tell accurately just how easily the motor is pulling its load. Especially when driving through traffic the response of the cir to clutch and motor control levers must be

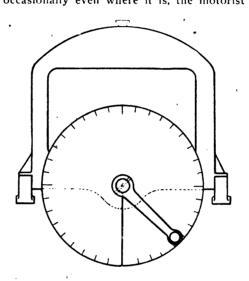
METHOD FOR TIMING THE VALVES

How the Motorist can Make the Necessary

Device—The Way in Which It Can

be Employed.

Valve timing seldom falls to the lot of the everyday motorist. When it does, however, it is apt to prove more than puzzling unless certain systematic methods are followed. Most of the modern and up to date cars are furnished with guide marks on the motor fly wheel which are labelled to indicate the proper opening and closing points of the valves, as well as the proper sparking point for the igniters. Where this convenience is not provided, and, indeed, occasionally even where it is, the motorist



may be considerably aided by the use of a simple device in the shape of a graduated disc, which may be slipped over the starting crank and used for determining the angular position of the crank shaft at any time.

The device in question may be either a sheet of stiff cardboard, cut circular and with a hole in the center and a slit cut radially in it so that it may be put into place without removing the starting crank, or, where greater permanence is desired, it may consist of a sheet of good firm paper, carefully laid out in circumference and degrees. and afterward mounted on a sheet of tin and shellaced or varnished, to preserve it. In either case, it is put in place and held firmly against the radiator with the zero point carefully adjusted so that one edge of the starting crank exactly coincides with the proper line, when the piston of the first cylinder to fire is on its upper dead center.

Once this adjustment has been made, the timing may be adjusted exactly according to the requirements of the motor in degrees—if that happens to be known, or the distribution of the various cylinders may be compared with absolute accuracy. If the setting of the valves is known in terms of piston travel, rather than degrees of crank motion, for example, it is merely

necessary to set the valves on one cylinder in this way. The others may be set to open and close in exactly the same time. by observing the degrees of crank motion. as recorded by the movement of the stars ing crank over the graduated scale, and josting them down for reference, as the first cylinder is timed. Afterward, the same setting may be obtained for the other cylinders by using the scale as a guide, the only special requirement being that of turning the scale about in such a way that the starting crank always crosses the zero line just as the piston reaches the top of its stroke. The same effect may be secured by making proper allowance for the difference in degrees between the various cranks, adding the requisite number of degrees to the setting first employed. as the different cylinders are treated.

Another use of this device, which is emphasized by the Autocar, from which the accompanying illustration is taken, is that of adjusting the clearance of the valve lifters to absolute uniformity. The degree of clearance between the lifter and the end of the valve stem, obviously governs within narrow limits, the timing of the valve itself. That is to say, diminishing the clearance also causes the valve to open a trifle earlier than otherwise would be the case. On this account it is important that the clearance should be uniform for all the cylinders of a multi-cylinder motor. This, it would be, were the valve stems all of the same length, and the cams absolutely uniform. But in the case of old motors, where the cams may be unequally worn, the simple expedient of measuring the clearance by inserting several thicknesses of paper between lifter and stem, will not suffice.

With the arrangement indicated, it is possible to test the clearance with absolute accuracy by inserting a very thin piece of paper between the lifter and stem and turning the crank slowly, observing the points at which the paper is gripped and released again by the two parts. Obviously, the number of degrees during which the paper is held firmly, should be the same for all exhaust valves, and the same for all inlet valves. Variations may be eliminated by adjusting the tappet-screws, where such are provided, or by lengthening or shortening the length of the valve stems.

Demountable Live Axle in Special Form.

To obviate the drawback peculiar to certain forms of live axle whereby it is necessary to dismount the part from the chassis in order to dissect it, a French designer has devised a special form of demountable axle so constructed that the gears may be withdrawn without even removing the wheels. To effect this the differential gear is mounted on a short, removable counter shaft, which drives the axle stubs through spur gearing. The adoption of helicoidal teeth on these gears also permits the axle to be cambred without necessitating the use of universal joints or couplings.

taken almost alone to show whether conditions are as favorable to the production of power as is possible. The manometer shows at once how fast the motor is running at all times, and so long as the driver carries a fairly good idea of what pressure reading should correspond to a given car speed, he can also tell whether the power is as great as it should be.

One Frequent Cause of Short Circuits.

Frequently batteries "run down" in a very short time. As frequently the battery is condemned, because the current was so quickly exhausted, when in fact the battery is not at all at fault, the cause lying in a short circuit somewhere in the wiring.

A common cause of short circuiting which yet is generally unsuspected, will be found in stray strands, of which most wires are built up, coming in contact with metal parts which should not be touched by the wire. Very often when placing the wire under a nut or around a stud, that is insulated from the rest of the metal, one or two of these minute strands will not be secured and shortly will vibrate or be jarred against the machine in such form as to permit of a continuous flow of the current. Obviously this contact will serve as an outlet for the current with the result that the batteries will soon become useless. If care is taken to properly secure the wire this batterycomplaint will be infrequent.

A quick way of testing a short circuit in the primary connections of the ordinary jump spark ignition system, is to apply a coltmeter across the terminals of the entire battery while the commutator is standing at one of its neutral points. After observing the reading of the instrument, throw the cut-out switch back and forth several times. If the circuit is perfectly insulated, there will be no difference in the reading under these circumstances. If there is a short-circuit or a ground, however, the needle will fluctuate, as the open circuit reading is always higher than that when the circuit is closed.

Replacing Core in Spark Plug.

As nearly all manufacturers of porcelain spark plugs furnish extra porcelains for their product, it seldom is necessary to buy a new plug simply because the core of the old one has become useless. There is, however, a right and a wrong way of introducing the new porcelain into the old base.

When removing the bushing that holds the core in place, the simplest method is to hold the base or shell of the plug in a vise, then a wrench should be adjusted to fit perfectly the hexagon sides of the bushing. If this is done no damage will be inflicted on the bushing, but if the wrench does not fit and is permitted to "climb" the bushing, i. e., to hold only at the corners of it, the bushing is apt to be strained to such an extent that it will not fit evenly on the gasket with the consequent results of a compression leak.

IN CLUBS AND ASSOCIATIONS

Big Club House Planned for Kansas City— New Organizations in Troy and Fort Smith—Annual Elections,

It was definitely decided by members of the Automobile Club of Kansas City at its last meeting to purchase a tract of land south of Kansas City and to build a club house. It is planned to have the club house at least 15 miles from the city and to get a plot large enough to include a garage, storage sheds and a field for outdoor sports. While no action was taken pending a decision as to the site, the members expressed themselves willing to expend \$10,-000 or more if necessary. A committee consisting of Dr. E. M. Hetherington, Amos Martin, Henry Fowler, A. J. Davies and Fred Heim was appointed to select a site and arrange building details.

Colonel Frank M. Joyce was unanimously re-elected president of the Minnesota State Automobile Association at its annual meeting held in St. Paul last week. Reuben Warner was made vice-president, and Dr. W. H. Card was again elected secretary and treasurer. The board of directors is made up as follows: Duluth, H. H. Myers; Faribault, W. A. Bill; Mankato, G. A. Lewis; Minneapolis, George H. Daggett, Dr. A. A. Law, Thomas H. Kennedy, Dr. C. H. Kohler, Frank M. Joyce, and Dr. W. H. Card; Owotonna, E. T. Winship; Red Wing, C. E. Bechter; Rochester, Dr. E. O. Judd; St. Cloud, J. C. Cotton; St. Paul, Reuben Warner and F. B. Lynch; Winona, E. W. Will-

Robert Beattie, of Little Falls, was elected president of the North Jersey Automobile Club, which has its headquarters in Paterson, at the annual meeting last week. Other officers were chosen as follows: First vice-president, Dr. J. H. Faulkner; second vice-president, Benjamin Eastwood; secretary-treasurer. James Madden, Jr.; captain, George E. Layton; first lieutenant, W. B. Proude; counsel, Jacob Vanderclock.

At its annual meeting held in Daytonna, the Florida East Coast Automobile Association elected the following officers: President, A. B. Foster; first vice-president; S. H. Gove; second vice-president, J. H. Allen; secretary, T. E. Fitzgerald; treasurer, F. N. Conrad; directors, Edward White, Henry B. Welch, R. M. Bond, E. F. Oates, J. B. Moore, and A. Hilliard.

George II. Wilson having positively resulted to serve a fifth year as president of the Louisville (Ky.) Automobile Club, Pike Campbell was chosen as his successor. The other officers are: First vice-president, John Ross; second vice-president, J. B. Lewman; secretary, Eugene Straus; treasurer, Walter Kohn.

The Troy (N. Y.) Automobile Club has

been organized with the following officers: President, F. B. Twining; vice-president, E. S. Platt; secretary-treasurer, Alonzo McConihe; governors, G. A. Cluett; LeGrand C. Cramer, H. S. Ide, John McGlynn, Joseph J. Murphy, R. C. Reynolds, John Squires and Dr. L. R. Whitney.

Fort Smith, Ark., now has an automobile club—the Fort Smith A. C.—with the following officers and directors: President, John Vaile; secretary-treasurer, Fred Reutzel; directors, George Lyman, Clifford Speer and Frank Handlin.

Another Joy Rider with Fake Checks.

The Zumstein company of Cincinnati, to say nothing of more than a score of other firms and individuals, would like to know the whereabouts of an individual claiming to be a well known business man of Springfield, Ohio, who left a trail of worthless checks from Cincinnati to Lexington, Ky. The man started out for a large time, after hiring a car from the Zumstein company and filling it with rapid acquaintances. Before the first round of pleasure was over a large plate glass window had been broken. It cost the man just \$90, which he paid by check, which was sent back with the discouraging stamp, "no funds." Along the booze trail to Lexington any one who wished might have a drink on the "Springfield" man. He would never permit another to buy, and at every stop stood treat for the house. Checks always satisfied the barkeeps. The return journey was even more merry, and when the Zumstein company presented their bill for \$200, the Springfield good fellow paid it without a murmur, by check. Then he left town and since that time the wires between Cincinnati, and Lexington and Springfield have been sizzling.

Bill for Transcontinental Boulevard.

By request of somebody, whose identity he has not disclosed, Representative Bourke Cochran of New York, introduced in Congress on the 14th inst., a bill which old timers pronounce the most remarkable legislative contrivance that ever found its way into the curiosity catacombs of the House. Its aim is to transform the 35th parallel of north latitude into a macadamized highway, to be constructed by the United States Government. It is to extend from the Atlantic Ocean to the Golden Gate, via Newbern, N. C., and to be electric lighted, policed and bordered with new idea garden cities wherein neither man, woman, nor child shall break the speed limit of eight miles an hour, on foot, roller skates, bicycles or automobiles.

There is a man in Yarmouth, N. S., who would like to trade a 15-year-old orchard, containing about 1,000 trees, two summer cottages, the whole valued at \$5,000, for a good automobile. He noticed the advertisement of a Pittsfield (Mass.) dealer who had a car for sale, and made the proposition to him.

MANY GARAGES LOOTED BY A LAD

Juvenile Prisoner at Los Angeles Accused of Long Series of Robberies—His Big Store of Spoils.

By the arrest of Earl' Stein, 16 years old, the police of Los Angeles think they have captured one of the cleverest crooks in the city, one whose garage robberies have baffled the city's detectives for more than a year.

When a detective searched the boy's room it was found to contain thousands of dollars' worth of automobile parts, tools, all kinds of tobacco, and other things.

Several days prior to the arrest of young Stein, the Auto Exhibit Co. reported the loss of valuable machinery, and a piece of brass worth \$90. A young man employed at the place was suspected. A detective, in a talk with him, learned that two boys had been in the garage a short time before the robbery was discovered.

Suspicion rested upon young Earl Stein. His mother refused to permit a detective to enter the house, and the latter procured a search warrant. In the boy's room, he says, were found hundreds of parts of automobiles. Two heavy, brass bound oaken chests contained hundreds of fine tools, and more parts of motors. There were also two motorcycles, dismantled so that identification would be impossible; automobile tires, a handsome shot gun, a trunk filled with Egyptian and Turkish cigarettes, expensive cigars, cigaret papers, boxes of tobacco and 20 pounds of chewing tobacco.

Earl is now at the Detention Home, awaiting trial. With him was arrested Augustus Gibbs, 15 years old, who was charged with having stolen a bicycle from Detective James Campbell, of the District Attorney's office. Stein is said to have been implicated, as it is alleged that the bicycle was dismantled and parts of it hidden in a sand pile, while the rest was taken to his room.

The garage robberies in Los Angeles have baffled the police for more than a year. It appeared that the thefts were committed by experts, because in every instance small but valuable parts of motors were taken. The machinists employed at the various garages were closely watched but no proof that any of them was guilty was obtainable. By the arrest of Stein the police hope to solve the mystery.

Automobiles Form a Funeral Cortege.

Butte, Mont., had its first automobile funeral recently when 18 cars, draped in sombre black, and carrying friends and mourners, followed the hearse which carried the remains of Joseph C. Kennedy to the cometery. The dead man was a prominent member of the Butte Automobile Club, and sold cars in that city.



The Week's Patents.

879.509. Flexible Tire Frame. Eugene D. C. Bayne and Lawrence A. Subers, Cleveland, Ohio. Filed Feb. 19, 1907. Serial No. 368,181.

1. A tire frame comprising an annular flexible tube having overlapping extremities, a rotatable support therefor, and means for aligning said frame upon said support, comprising keys inserted in the inner edge of the frame and bearing against the edge of said support, substantially as described.

879,511. Tire and Luggage Carrier for Automobiles, etc. Joseph J. Bond, Reading. Mass. Filed March 20. 1907. Serial No. 363,466.

1. A carrier comprising a receptacle

formed to enter an automobile tire, and provided with means for attachment to a support, said receptacle being surrounded by a tire receiving space, and the said carrier having means for securing a tire in said space.

879,646. Foot Rest for Vehicles. Louis A. Jones, Cambridge, Mass. Filed Feb. 20, 1907. Serial No. 368,512.

1. An apparatus of the character described comprising in its construction a body, a movable foot rest located at all times within said body, a door pivoted to swing about a vertical axis, and mechanism operatively connecting said foot rest to said door.

879,757. Piston Ring. Henry Ford. Detroit, Mich. Filed July 16, 1906. Serial No. 326,481.

1. A packing ring comprising an inner ring having oblique overlapping ends and a pair of outer facing rings seated side by side on the inner ring each having their ends halved and gained together, said ends being staggered in relation to each other and to the inner ring ends.

880,024. Explosive Engine. John D. Hay, Chicago, Ill., assignor of one-half to William R. Donaldson and one-fourth to George W. Marble, Chicago, Ill. Filed Oct. 13, 1906. Serial No. 338,752.

1. In a device of the class described the combination with a crank case and cylinder secured thereto having an inlet port of a passage cored in the wall of the cylinder opening directly into the crank case at one end and opening through the side of the cylinder, an exhaust port opening from the cylinder above said passage, a piston in

The "Long-Arm" System Co. Cieveland, Ohio

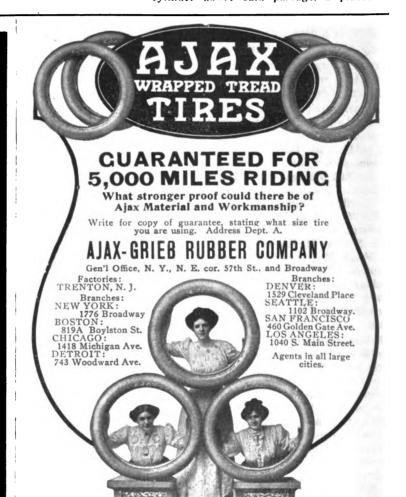
1909 Models on Axles (3 Sizes)

Cone Clutches, Steering Reaches, Buffers, Propeller Shafts, Hand Levers, etc.

Send for cuts, prices, etc. Your own designs manufactured in quantity. Our gear cutting is now beyond reproach. If you cut and chamfer your own gears you need our Automatic Tooth Chamfering Attachment.

SALES DEPT.

AMERICAN DISTRIBUTING CO.,
American Trust Building, CLEVELAND, OHIO



BRUSH \$500 RUNABOUT

We are getting ready for the rush. Having been sold up every minute since the first week of January we know what fair weather is bringing and have prepared for it with more machinery, increased orders for stock and more room.

Still if you want to handle Brush Runabouts this year, take it up at once. Best way is to come to our factory, if possible. Don't delay, we will soon be sold up for the year.

BRUSH RUNABOUT CO., Detroit



Digitized by GOOGIC

said cylinder having a chamber in the head thereof, passages leading downwardly therefrom through the wall of the piston and opening outwardly, one of said passages adapted to register with the end of the passage in the cylinder wall and a passage adapted to communicate with the other passage in the piston at the lowest limit of movement of the piston and also communicating with the inlet port for the cylinder.

880,025. Running Gear or Suspension Frame for Vehicles. Reinhold Herman, Crafton, Pa. Filed Dec. 15, 1905. Serial No. 291.876.

1. A vehicle frame comprising the combination with a pair of axles, and springs mounted thereon, bolsters mounted on the springs, and a pair of superposed frames, one of which is journaled at one end in one of the bolsters, and the other of which is journaled at the opposite end in the other of said bolsters.

880,050. Reversing Gear for Internal Combustion Engines. Jakob Sulzer, Winterthur, Switzerland. Filed Dec. 5, 1905. Serial No. 290,369.

1. In a reversal gear for internal combustion engines the combination with a fuel admission gear of a roller carried by said fuel admission gear, an actuating cam and means for moving the roller into a middle position beyond the range of the actuating cam and into either of two extreme positions within the range of the cam and corresponding respectively with the two directions of running of the engine, substantially as described and for the purpose set forth.

880,051. Reversing Valve Mechanism for Internal Combustion Motors. Jakob Sulzer, Winterthur, Switzerland. Filed Dec. 8, 1905. Serial No. 290,915.

1. An internal combustion or explosion motor having a reversing valve and a fuel-supply valve, in combination with oscillating cam plates for actuating said valves, and means for shifting the oscillating cam plates to an intermediate position in which they do not move the said valves, and into two extreme positions, corresponding to the two directions of movement of the motor, in which they do move the said valves, substantially as described.

880,076. Running Gear for Motor Driven Vehicles. Rex P. Hicks, Minneapolis, Minn. Filed Nov. 21, 1906. Serial No. 344,-451.

1. In a running gear of the kind described, the combination with a main frame and a supplemental frame, of rear wheels journaled to said supplemental frame, a driving wheel journaled to said supplemental frame between and forward of said rear wheels, resilient main frame supporting connections applied to said supplemental frame longitudinally intermediate of the axes of said driving wheel and of said rear wheels, and connections between said main and supplemental frames for causing the same to travel together, substantially as described.

880,083. Friction Clutch. Ernst Lehmann, Marchienne-au-Pont, Belgium. Filed Nov. 27, 1906. Serial No. 345,370.

1. In a friction clutch in combination a casing, the said casing serving as a driving member and being provided with teeth on its outer edge, friction members co-operating with the inner face of the said casing, a driven shaft, a sleeve adapted to slide on said shaft and acting on the friction member to bring them in frictional engagement with the driving member, bolts or catches pivoted on the said friction members and

adapted to be engaged with the teeth on the driving member, a second sleeve actuating the said bolts or catches, and means whereby the said second sleeve is acted upon on the stopping of the clutch substantially as described and for the purpose set forth.

880,084. Friction Driving Clutch. Axel D. Le Moon, Chicago, Ill. Filed April 11, 1907. Serial No. 367,646.

1. The combination of a driving member and a driven member separately journaled to rotate about the same axis, a friction shoe loosely mounted between said members and having thereon two cam surfaces located in different angular positions with respect to the axis of said members, one of said members having thereon a pair of projections angularly spaced with respect to said axis to correspond with the angular spacing of said cam surfaces, said cam surfaces and projections being adapted to urge said shoe toward said driven member through the relative rotation of said shoe and driving member.

880,093. Speed Limiting Device for Electrically Ignited Explosive Engines. Frederic S. Perrin, New York, N. Y. Filed Jan. 9, 1907. Serial No. 351,489.

1. In an electrically ignited explosive engine, a primary circuit, means for shunting the primary current from its circuit, consisting of a speed indicator; a movable index, a contact point adapted to be set at any point upon the indicator scale, in the path of the index; and an electric circuit, in multiple with the primary circuit, including the contact point and the index.

880,110. Acetylene Gas Generator. Leon Sussman, Bayonne, N. J., assignor to The Manhattan Screw and Stamping Works, New York, N. Y., a Firm. Filed April 28, 1906. Serial No. 314,114.

1. In an acetylene gas generator, a carbid chamber and a water chamber, a valve which in one position establishes communication between the two chambers and which in another position throws the carbid chamber into communication with the outer air, and another valve located in the connection between the water chamber and the first-named valve and provided with a stem which entends outside of said chamber for regulating the flow of water to the carbid chamber.

880,117. Compensating Mechanism for Automobiles. Charles H. Ball and John F. Rogers, Cleveland, Ohio. Filed April 6, 1906. Serial No. 310,297.

1. A compensating mechanism for vehicles, comprising a driven axle, a wheel mounted to turn independently on the axle, and mechanism to positively engage the wheel with the axle comprising segments and a cam and wedges to force the segments into locking engagement with the wheel.

880,184. Lamp and Lantern. Charles Bergener, Rochester, N. Y., assignor to C. T. Ham Manufacturing Company, Rochester, N. Y. Filed Sept. 30, 1907. Serial No. 395,108.

1. The combination with a lamp or lantern body and a movable part adapted to be fastened thereto, of a spring catch pivoted to said body and a lug on said movable part which is engaged by said catch, the latter being constructed of elastic wire and comprising bows on opposite sides of said lug, pintles at adjacent ends of said bows, locking portions at the opposite ends of said bows engaging the outer face of said lug, and an end loop forming a raised finger piece, substantially as set forth.

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

STODDARD-DAYTON—We have stored in Paris a 1907 touring car in fine condition, full equipment for touring. Will sell or trade for a Stoddard-Dayton in the United States. THE DAYTON MOTOR CAR CO., Dayton, O.

FOR SALE—1907 Pullman runabout or surrey, detachable rear seat, 4 cylinder, 30-35 H. P.; victoria top; Sprague's folding front. Five gas lamps and generator. All metal parts nickel plated. Tires, Goodrich, Bailey tread. Tires and car good as new; car run 900 miles. Reason for selling, have ordered new 6-cyl. Pullman. Car cost new \$3,000; price, \$1,250. Address Post Box 448, Harrisburg, Pa.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade two and four cylinder motors, 10 to 45 horsepower. They are equipped with self-contained oiling system and ready for attaching magneto. Highest grade workmanship, efficient, durable and simple. Also clutches and trans-Send for catalogue.

CONTINENTAL MOTOR MFG. CO., Muskegen, Mich.
K. FRANKLIN PETERSON, Western Representative, 166 E. Lake St., Chicago, Ill.
T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Workmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model \$40. American \$25. Guaranteed Absolutely for Five Years. STEWART & CLARK MFG. CO., 509 Diversey Boulevard, Chicago, U. S. A.



THOMAS

America's Champion in the New York-Paris Race. Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St. Syracuse, N. Y.

THE CHANDLER CO.

Name Plates and Stampings SPRINGFIELD. MASS.

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Meter Cer"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

Gasoline and Electric-for Pleasure and Business Studebaker Automobile Co., South Bend, Indiana

TRUFFAUL/T-HARTFORD SHOCK ABSORBER

The Device that made Safe, Speedy and Comfortable
Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO.

R. V. Hartford, Pres. 66 Vestry St., New York

\$250 "SUCCESS" AUTOMOBILE

The Original Auto-Buggy,
Practical, durable, economical
and absolutely safe. A light,
strong, steel-tired Auto-Buggy,
Suitable for city or country use.
Speed from 4 to 20 miles an
hour. Our 1907 Model has an extra
patent ball-bearing wheels; price \$27;
\$400. Rubber Tires, \$25 extra. W

Success Auto Buggy Mfg. Co., Juc. 531 De Bullvere Ave., St. Los

SIDE-WIRE SOLID MOTOR TIME THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akron, Ohio

Address Eastern Inquiries
riord Motor Car Ca
of New York
1540 Broadway,
New York City. 1372 East 12th St., Cleveland

Me

a Mitchell. Phone "that" to any Mitchell Agent and he'll take you out if you're interested in the best value for money outlay you ever saw in the automobile line. Mitchell alog 18.

MITCHELL MORE THOUGHT AGENT AG

alog 18.
MITCHELL MOTOR CAR CO.,
281 Mitchell St., RACINE, WIS.

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name.

Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



THIS "GOTHAM STA-RITE"

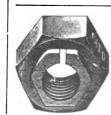
is equal to any \$1.50 plug. Has big air chamber, protected porcelain, bronze non-sticking bushing, won't leak,—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price-\$1.00.

THE R. E. HARDY & CO., 86 Watts Street, New York City

Apperson Policy

"QUALITY NOT QUANTITY" If you want a good car write u

APPERSON BROS. AUTOMOBILE CO. Kokomo, Indiana. Members A. L. A. M.



Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.

YORK MOTOR CAR CO., York, Pa.

ing all previous records.

4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia

to Savannah, Ga., March 5th to 18th,

through mud up to the radiator, beat-

This is the

PULLMAN

1908 Model D. 50 H. P.
Nev factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
New York.

LOGAN TRUCKS ARE DESIGNED RIGHT AND BUILT RIGHT.

THEY DO THE WORK

Write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chillicothe, O.



INVADER

Boston Branch Motor Mart 91 Church St.

New York Carford Motor Car Co. CHAS. F. KELLOM & CO., Philadelphia, Pa.

"AURORA" THE

Runabout \$775—20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agenta.

AURORA MOTOR WORKS.

If you are Interested in Motorcycles THE BICYCLING WORLD and MOTORCYCLE REVIEW

Will Interest You. Published Every Saturday by

BICYCLING WORLD CO., 154 Nassau St., New York City

Digitized by Google



\$375 and Upwards

The automobile for winter use. Air cooled—no pipes to burst. Solid rubber tires—no punctures. Strong, powerful, durable, reliable. Double cylinder—9-10 H. P. Economical in gasoline consumption. A good proposition for automobile dealers.

Write today for Catalogue and Novelette

W. H. KIBLINGER COMPANY Box No. 250 AUBURN, IND.

The Truth About the Automobile and What It Costs to Maintain One
A 64 page booklet containing sworn statements of 158 users of the

SINGLE CYLINDER CADILLAC showing actual cost of maintaining their cars. It also contains much advice of value to the automobile buyer. Ask for free copy of Booklet No. 6.

CADILLAC MOTOR CAR COMPANY, Detroit, Mich. Member Assn. Licensed Auto. Mfrs.





INDEX

Built to outweer an auto, and it will Send for Booklet Index Speed Indicator Co. MINNEAPOLIS, MINN.





Continental Ready-Flated Tires. They reduce tire expense

NEW TALL CANDETCHOUS COMPANY

CONTINENTAL CAOUTCHOUC COMPANY

1788-1790 Broadway, cor. 58th St. New York City.

"Keep your eye on Continentals"



A. O. SMITH CO.

Makers of

High-Grade Axles



Pressed Steel Frames
Steering Columns Transmissions
Steel Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street.

MILWAUKEE. WIS.

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."
2-Cylinder and 4-Cylinder
Runabouts, Roadsters, Touring Cars,
15 H. P., 24 H. P., 35 H. P.
Prices, \$850, \$1,250, \$1,500, \$2,00.

JACKSON AUTOMOBILE CO., Jackson, Mich.



Motor Car Accessories

Spark Plugs, Cable, Switches, Lamps, Horns, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture. New illustrated catalogue free.

THE AUTOMOBILE EQUIPMENT CO. 256 Jesserson Ave., Detroit, Mich

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



For catalogues, address
THE CONTINENTAL AUTO MFG. CO.

THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO.

(*Estab*, 1851)

INDIANAPOLIS, IND.

Luxurious

Completely

Appointed

and

Bryn Mawr, Pa.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MFRS. TOPEKA. KANSAS

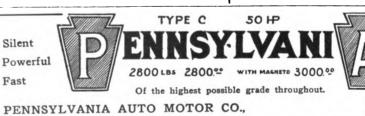
LAVALETTE & CO.

80% of Magnetos

used in 6-cylinder cars are

EISEMANN High-Tension MAGNETOS

112 West 424 Street. NEW YORK



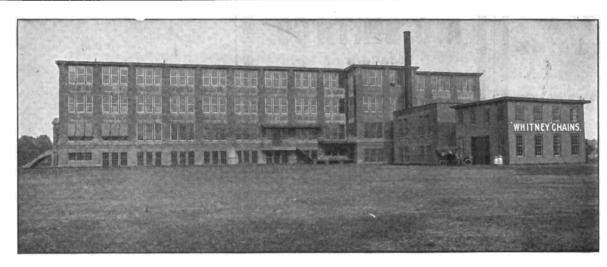
THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to

The Motor World

for one year, commencing with the issue of

Address



We are now well settled in our

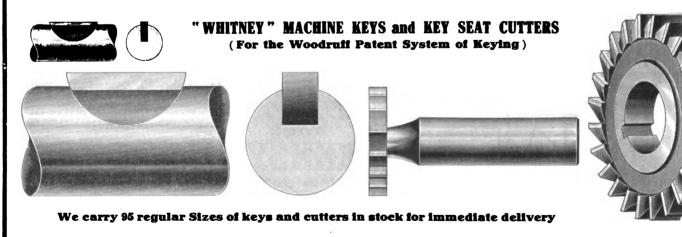
New Factory and

READY TO SHOW RESULTS

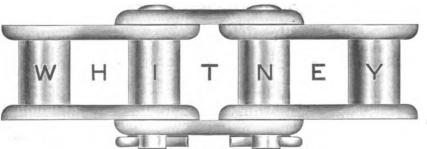
Prompt Delivery and Constant Improvement in Quality

In our effort to possess the Finest Chain Plant in existence and to maintain the highest degree of Accuracy, Efficiency and Finish we are going to the very limit.

We will now make all sizes of Rolier and Bushing Chains for which there is a reasonable demand.

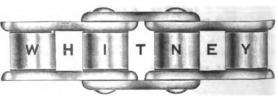






Bushing Chains are like Roller Chains- Without Rolls

Roller Chain



The Whitney Mfg. Co.

Hartford, Conn.

APPERSON'S

Wonderfully Consistent Showing

At the Briarcliff Race, New York, April 24th, the Apperson "Jackrabbit" won the Fourth place, defeating nine foreign and nine American cars.

The winners of First and Third places each had three cars competing; the Apperson defeated two out of three of each. The winner of Second place had two cars competing and the Apperson defeated one of them.

The Apperson was the only single entry of any one make of car to finish before the race was stopped.

The Apperson defeated one or more cars of every other make that competed.

OTHER VICTORIES

February 29th:—The Apperson won the Altadena-Pasadena Hill Climb in California, breaking the record and defeating twenty-eight cars.

February 21st:—The Apperson broke and now holds the road record between Los Angeles and Bernardino, California.

March 18th:—The Apperson won the 180-mile race for Stock Cars at Savannah, Georgia.

March 19th:—The Apperson won second place in the 360-mile race for Stock Cars at Savannah, Georgia.

April 19th:—The Apperson, in a field of over 80 entries, made faster time in the Fort George Hill Climb, New York, than any other foreign or American gasoline car.

There is a reason for this wonderfully consistent showing. It lies in Apperson Experience and Apperson Quality.

We have a remarkably attractive line for the <u>Season of 1909</u>, and invite immediate correspondence with reliable dealers.

APPERSON BROS. AUTOMOBILE COMPANY

KOKOMO, INDIANA

Members A. L. A. M.





Motor Cars

are a combination of all that has proven best in Modern Motor Car Construction. They are built of the best material money will buy.



Model K-4-cyl., 4%x5 \$3500

Model R-6 cyl., 41/2 x 43/4 \$4200

Model N-4 cyl., 5x5 **\$3700**

Model T-6 cyl., 5x5 **\$**5000



Write for Particulars

National Motor Vehicle Company

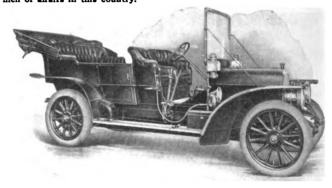
1007 East 22d Street

INDIANAPOLIS,



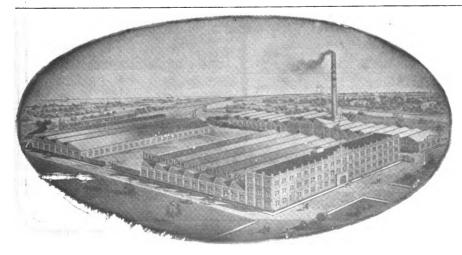


Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md. Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co. Dealers are wanted in all localities where we are not now represented.

Dealers are wanted in all localities where we are not now represented. MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa. Licensed under Selden Patent.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgweter Park CLEVELAND, OHIO, U.S.A.



TRY MILLER

8

STORES

This expression has developed into a trade term

THERE'S A REASON

The public, which in the past, has experienced difficulty in obtaining automobile supplies should give us a trial, by mail, or a personal visit.



We Carry in Stock the Largest Assortment of PARTS, FITTINGS AND SUNDRIES
To be Found in this Country

Our Catalog, the most complete one of its kind, is an encyclopedia of motor car supplies; it is used daily by other supply houses and they could not get along without it. A copy mailed to any one on request.

Order from nearest Branch and save time and express charges.

STO R E S

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HOME OFFICE: 97-99-101 Reade Street,

NEW YORK CITY

One Price for Warner Auto-Meters

EVER, until this year of 1908, has there been a speed indicator sold at one absolutely fixed list price. Manufacturers have "named" a list price and some even required the dealers to sell at "that" price.

Only one "insisted" upon it being observed. That was ourselves. But, unfortunately, we sold to the jobber also — and the jobber cut the price.

Then there was fun in the camp. That hurt us—it hurt the dealer, too.

Then, in his haste to close a sale, the jobber would let wrong gear ratios go out—that

hurt the consumer, the dealer and ourselves. For the jobber knows no law.

So we've cut the jobber's quotations out. If he gets Warner Auto-Meters he pays for them the exact figure the dealer pays. If he cuts, he gets no more Auto-Meters.

THIS STAND IS POSITIVE.

Warner Instrument Co.
171 Wheeler Ave., Beloft, Wis.

"EISEMANN" MAGNETO WINS AGAIN AT BRIARCLIFF

DUPLICATING ITS VICTORY

SAVANNAH ON ISOTTA FRASCHINI

DRIVEN BY L. STRANG

LAVALETTE & CO., 112-114 W. 424 St., New York City
'PHONE, 5141 BRYANT

The "Long-Arm" System Co. Cleveland, Ohio

We would like to send you our cuts and prices on

1909 Model Auto Parts

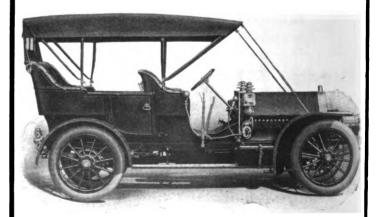
Axles (3 sizes), Clutches, Reaches, Buffers, Propeller Shafts, Hand Levers, etc.

If you have any designs of your own Auto Parts which you wish to have manufactured in quantity, write us, sending prints and specifications with required quantity and deliveries. We will respond promptly.

SALES DEPT.

AMERICAN DISTRIBUTING CO.,
American Trust Building, CLEVELAND, OHIO

THE "JEWEL 40" THE "NON-SKIDDING" CAR



Compare following specifications with other cars at \$3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY
234 Walnut Street, - Massillon, Ohio, U. S. A.



MAGNETO

or

THOMAS CAR leading in the Race from New York to Paris

The remarkable performance of the Bosch Magneto on America's representative is beyond a parallel. The Bosch Ignition System accomplished its work in such a reliable manner that the drivers of the car have not found it necessary to touch or repair the Magneto since leaving New York.

Equip your car with the most reliable ignition system in the world.

Bosch Magneto Company 160 West 56th Street NEW YORK



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



A TOURING CAR IN THE TRUE SENSE OF THE TERM

The man who gets the most pleasure from his touring car is not the man who limits his touring to the macadam roads; for the most interesting sections of the country and those of the greatest natural beauty lie, for the most part, beyond the regions of improved highways. For that reason, there is no quality of a motor car more important than the ability to traverse had roads.

In unique degree, the White possesses the qualities of a "bad roads" car. Owing to the perfect flexibility of the engine, the White tourist can accommodate the speed of his car, yard by yard, to the condition of the road, speeding up on each little stretch of good road, and slowing down for each hole and "thank-ye-ma'am"—without shifting of gears or any manipulation except of the throttle. The tremendous pulling power of the White engine under all conditions means immunity from getting stuck in the mud or sand. Running through deep water, as in fording streams, is easy for a White. And as for climbing grades in mountainous regions—there is no other machine which can approach the White in hill-climbing qualities.

Drive a White Steamer and see the country

THE WHITE COMPANY CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1750 Market St. Chicago, 240 Michigan Ave. Philadelphia, 629-33 N. Broad St. Cleveland, 407 Rockwell Ave. Pittsburg, 138-148 Beatty Street.

Jones Speedometer

the pioneer is the accepted standard Speed Indicator. Standard by performance—not by mere Prices range from \$25.00 to \$200.00. At any price the Jones Speedometer is the best in the world. Comparison will prove this. And when we say comparison we mean internal as well as external.

Jones **Speedometer**

76th Street and Broadway **NEW YORK**

Boston, 109 Massachusetts Ave. Philadelphia, 259 N. Broad St. Chicago, 1421 Michigan Ave. Cleveland, 1841 Euclid Ave.



PRINCS

With All the Life of Metal Retained and Built with the Knowledge of Long Experience

Our experience in successfully meeting extraordinary requirements has taught us that the dynamic stress or combination of shock, push and twist to which automobile springs are subjected, can only be resisted by the use of a material of high dynamic qualities, made up by a process that will preserve all the initial life of the metal and constructed on mechanically perfect principles.

In our Special Vanadium Spring Steel, we have the right material: In our thermo static furnaces, the right method of retaining the "life" of the metal, and from our wide experience, the correct mechanical principle for successfully resisting these conditions and making "anti-fatigue" springs that are as nearly perfect as can be.

Our new booklet on springs explains these points in detail. Let us send it to you to-day.

THE CLEVELAND-CANTON SPRING CO., Canton, Ohio, U. S. A.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

STRONG-DURABLE CALELESS—RUSTLESS MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO

MOTOR MAKERS



Quality and BOTH right.

The "Rutenber" Carburetor

picked as the best in the world, we are now making and selling.

LET US GIVE YOU INFORMATION.

THE WESTERN MOTOR CO., Logansport, Ind. Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

TRIUMPH GREASE

THE LATEST AND BEST ON THE MARKET

WHAT IS IT LIKE?—It is the only "Spongy" Grease in the world. Its velvety consistency is just heavy enough not to run out and leak. Saves labor in cleaning machine. Will not stick or gum. Not effected by heat or cold. WHY NOT TRY IT?

You will never know its merits until vou do. Why be bothered with a smeared machine, when you can procure a lubricant that will NOT leak out, and lasts LONGER than any other? Those who are on the alert for the BEST, usually get it!

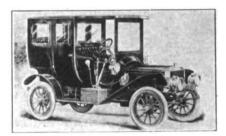
Put up in 5, 10, 25 and 50 lb. cans.

Manufactured only by the

Perfection Grease Company,

South Bend, Ind.

BODIES AUTOMOBILE

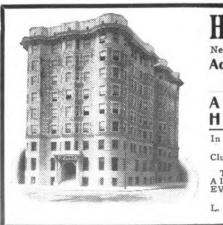


TWO FACTORIES

Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimm

RACINE NOVELTY MFG. COMPANY,

Racine, Wis.



New and Absolutely Fireproof. Adams Ave. & Park St. DETROIT, MICH.

AUTOMOBILE **HEADQUARTERS**

In center of Theatre, Shopping and Business district. and Business district.

Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
A la Carte Cafe
Grill Rooms
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.
L. W. TULLER Prop.
M. A. SHAW, Mgr.

Digitized by Google



-Singer Town and Country Car, 28-30 H. P., \$3000

If you are thinking of a light touring car, why not get one that is also an ideal town car? The Palmer-Singer Town and Country Car is a beautiful open car, amply powered for country use—and a closed car for town use—the BEST town car—the BEST light touring car money can buy.

Metropolitan Palmer & Singer Mfg. Co. Bistribetors the SELDEN 1620-22-24 Broad-way Name Vol.

4 Cylinder

30 H. P. \$1,950

Inspection Lamp

When in trouble at night the Wico Inspection Lamp is a positive necessity. A sufficient length of cord is provided, so that any part of the car may be reached readily. It is light, compact and durable. The electric light bulb is provided with a strong brass cage. All parts are made of brass and highly polished. Price, in box convenient for carrying, prepaid, \$1.75

Witherbee Igniter Company 1876 Broadway NEW YORK

Chicago 1429 Michigan Ave.

Detroit 220 Jefferson Ave.

Buffalo 720 Main St.

Baltimore Office 609 Continental Building

Exclusive Features of Solar Lamps

(1)The Internal Method of Screw Assembling

■ All Solar Headlights when assembled are riveted by internal screws. This exclusive feature produces a perfectly smooth exterior surface, permitting ease of cleaning. This is a very important feature for the owner to consider when purchasing a motor lamp.

aThis important detail and all others explained fully in our new 1908 catalog. Write for copy.

BADGER BRASS MANUFACTURING CO.

Two Factories KENOSHA, WIS. 436 Eleventh Ave., NEW YORK







Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any \$4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., \$1900

Write today for special circular describing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

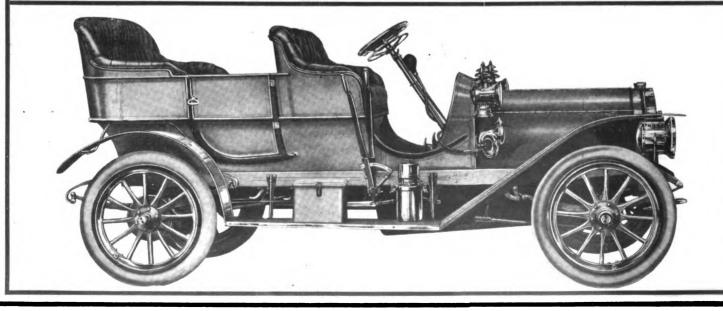
Chicago

Milwaukee

Roston

BRANCHES AND DISTRIBUTING AGENTS Philadelphia

San Francisco



Volume XVIII.

New York, U. S. A., Thursday, April 30, 1908.

No. 5

A. M. C. M. A. SELECTS SHOW DATES

Exhibition in Grand Central Palace Will Open Dec. 31—Circumstances than Influenced the Selection.

Having decided to assume the whole burden of promoting and conducting the next show in Grand Central Palace, New York, the Automobile Club of America having condescendingly unshouldered its part of the load, the American Motor Car Manufacturers Association has lost no time in setting the dates for the function.

General Manager Reeves announced early this week that the show committee, of which H. O. Smith, of the Premier Motor Car Co., is chairman, had selected the dates Thursday, Dec. 31, 1908, to Thursday, Jan. 7, 1909. These dates will precede the period of the Licensed Manufacturers' show in Madison Square Garden; as although the A. L. A. M. has not made a definite decision, it is pretty well known that the Garden show will occupy either the second or the third week in January.

The A. M. C. M. A. committee considered the desirability of including in the program a seeing-the-old-year-out celebration on Dec. 31st, but probably recalling the sad results of the importers to work up a hurrah of the sort last year, they wisely abandoned the idea. No effort will be made to attract the horn-tooting, confetti-throwing mob that fills the street on the last night of each year, and that inclines to "rough-house" methods generally.

The show committee thinks that the show dates are very good ones from the selling point of view, on account of the many dividend payments at that time of the year. It estimates that about 150 great railroad and industrial corporations pay out from this city almost \$200,000.000 in dividends on stocks alone, in addition to the millions of dollars that are disbursed as payments on bonds, mortgages and other securities, and that the recipients are then in a mood to

spend money for automobiles, among other things.

. Martini Headed Toward Bankruptcy.

The Martini Import Co., New York, has gone the way followed during recent weeks by several other importing houses, a petition in bankruptcy having been filed against it by these creditors: Frank Presbrey Co., \$505 for advertising; Ernest Edwards, \$371, advertising, and Pneu L'Electric Co., \$226, merchandise. It was alleged that the company is insolvent and on March 27 transferred all its assets to F. F. Palmer, a creditor. The company is a New York corporation, incorporated March 1, 1907, with a capital stock of \$50,000, and continued a business previously conducted by a firm which had dissolved.

Acme Makes Another Payment.

The receiver of the Acme Motor Car Co., Reading, Pa., has declared another dividend of 20 per cent., making a total of 85 per cent. that has been paid to the creditors. The receiver still has on hand \$5,824, which is held pending final settlement of the claim of Col. Peter H. Corr, for \$5,000, which the referee has disallowed.

Col. Corr alleged that the amount was an obligation of the company, but the referee decided that it represented a note given by Frank A. Devlin, as president of the Acme company, to replace a personal note given long before, and that it was done without the consent or ratification of the company.

Ampere Again Short Circuited.

A petition in bankruptcy has been filed against the Ampere Mfg. Co., New York, makers of electric appliances, by these creditors: Leopold Pollock, \$911; John S. Lamson & Brother, \$37, and Joseph J. Fitzhenry, \$9. It was alleged that the company is insolvent and has transferred property to some creditors to prefer them. On January 30 Marcel Levy was appointed receiver of the company in the Supreme Court in dissolution proceedings. The liabilities were \$1,727 and the assets \$1,283.

TO REDUCE SELDEN ROYALTIES

Pressure from Within A. L. A. M. Finally Forces Action—New Basis Agreed on and Court's Approval Sought.

One of the important results of M. J. Budlong's tenure of office as general manager of the Association of Licensed Automobile Manufacturers became public property when on Saturday last the receivers of the Electric Vehicle Co. took the first step toward reducing the royalty exacted of the members of the Association under the terms of their membership agreement recognizing the Selden patent. If the court approves the receivers' application, the Electric Vehicle Co. will obtain annually not more than \$150,000 as its share of the royalty, and the Association not more than \$100,000, and in the event of a decision unfavorable to the patent being rendered, the royalties will be trusteed pending the result of an appeal.

It has been an open secret that for nearly a year certain members of the A. L. A. M. have been bringing strong pressure to bear to attain this end and when, early last fall. Budlong was made general manager, a strong card was obtained. As former president of the Electric Vehicle Co., he naturally was conversant with the other side of the situation and thus was unusually well placed. The whole matter was left with the executive committee of the A. L. A. M., and with Budlong they worked to good purpose, although the appointment of receivers for the Electric Vehicle Co. did nothing to simplify their task.

The action of the receivers on Saturday last represents the influence of their labors. On that day the receivers, H. M. Barrett and H. W. Nuckols, applied to the United States Circuit Court for the New Jersey District, for permission to modify the existing agreement between the company and its licensees under the Selden patent. The petition recites that under the existing

agreement the licensees are obligated to pay 11/4 per cent. of the catalog price of all vehicles they produce, except such as may be exported, on which the royalty is 1/2 per cent. Payments are required to be made quarterly, a discount of 20 per cent, being allowed for payments within 15 days, thus making the net royalty 1 per cent. The receivers acknowledge what has been known to the limited few-that a "large majority" (all save two, it is understood) have refused to pay the sums due for the past two quarters, on the ground that the royalty is "excessive and oppressive." Accordingly, the receivers believe it to the interests of the creditors and stockholders of the Electric Vehicle Co. to modify the agreement.

This proposed agreement, if made, will reduce the royalties required to be paid by the members of the Association by 20 per cent., with the further limitation that the maximum royalties to be paid in any one year shall not exceed \$250,000. It also provides that should a decree be entered adjudging the Selden patent invalid, the royalties shall, pending an appeal from that decision, be paid to the trustee to await the outcome of the appeal. It also contains certain modifications of the terms upon which new members to the Association may be admitted, and surrenders to the Association control of litigation to compel payment of royalties in excess of the maximum annual amount of \$250,000 above referred to. The "terms for new members" are understood to be a matter of phraseology.

The court has set Monday, May 4th, as the date for hearing on the petition.

If the Court lends approval, as is probable, it will mean that henceforth the total revenue in royalties from the Selden patent will not exceed the sum of \$250,000 annually. The 20 per cent reduction in the royalty will bring the proportion from 11/4 to1 per cent., which, less the 20 per cent offered for cash 15 days, will make the net royalty eight-tenths of 1 per cent. There will be no change in the basis of division between the Electric Vehicle Co. and the A. L. A. M. As at present, the former will retain threefifths and pay to the association the remaining two-fifths. On this basis, if the maximum amount,\$250,000, is reached, the Electric Vehicle interests will receive \$150,000 and the A. L. A. M. \$100,000.

Rambler Branch Books Big Order.

One of the largest single orders ever placed with a Chicago automobile house was secured by the local branch of Thomas B. Jeffery & Co., on Thursday, April 23. when six large seven-passenger Rambler cars were purchased by the Big Horn Basin Development Co. for use at Cody, Wyo. The Chicago promoters of the company were desirous of securing six automobiles that were thoroughly reliable and dependable, for the purpose of transporting passengers from Cody, the railroad station to the land they have for sale. Hence the purchase of Ramblers,

The Week's Incorporations.

Cleveland, Ohio.—Whitcomb Auto Livery Co., The, under Ohio laws, with \$25,000 capital. Corporators—Mac E. Meisel et al.

Hammond, Ind.—Hammond Garage Co., under Indiana laws, with \$5,000 capital. Corporators—J. W. McMullen, E. C. Houk, Thos. Larene.

Syracuse, N. Y.—Kolbe Auto Co., The, under New York laws, with \$4,000 capital. Corporators—Richard E. Kolbe, John D. Buckmaster, and Florence L. Buckmaster.

Camden, N. J.—Penn Auto Supply Co., under New Jersey laws, with \$20,000 capital; to deal in automobiles, etc. Corporators—F. W. Mills, H. M. Browne, and H. P. Jones.

New York City, N. Y.—Regal Motor Car Co. of New York, under New York laws, with \$50,000 capital. Corporators—Henry Amerman, 111 Broadway; Francis P. Rawle, 6 Wall street; James C. Austin, 156 Broadway, New York City, N. Y.

St. Louis, Mo.—Seeing St. Louis Automobile Co., under Missouri laws, with \$2,000 capital; to operate automobiles for hire, to deal in automobiles and automobile sundries. Corporators—G. Delaplaine, T. G. Boehm, J. W. Hapel, B. W. Frauenthal, E. Buchanan.

How Railway Discrimination Hurts.

"Discrimination in freight rates by the railroads is one of the predominating drawbacks of the automobile industry,' Frank Briscoe, makers of the little \$500 Brush runabout which has become so popular in the west. "Especially is the matter of freight rates discouraging to the maker of small cars and motor buggies. There is no sane reason why the automobile should not be shipped as cheaply as carriages. The small cars could easily be 'knocked down,' the body and running gear shipped as a carriage and the motor billed as an engine just as marine engines are shipped; thus saving the buyer a snug little sum on transportation rates. The Freight and Transportation Committee of the American Motor Car Manufacturers' Association have this matter in hand and should be supported by all manufacturers of cars regardless of trade affiliations. When the freight rates are amicably adjusted the first cost of an automobile will be materially reduced."

Boston Bars Even Studded Tires.

A number of Massachusetts owners will have to invest in new tires if the edict of the Metropolitan Park Comission is rigidly enforced. The commission, which enjoys privile greater than those of the czar, has rued that no automobiles fitted with not merely tire chains, but with armored or metal studded tires, or other devices of metal, will be permitted to drive on any of the roadways or parkways in Boston under its jurisdiction. An order embodying this

provision has been framed by the commissioners and will go into effect to-morrow (Friday). Violation of the rule is made punishable by a fine not exceeding \$20.

Darracq Files Its Schedule.

Schedules in bankruptcy of the Darracq Motor Car Co., New York, which recently failed, show liabilities of \$61,219 and nominal assets of \$85,232, consisting of twelve automobiles, \$44,867, covered by a bill of sale to the New Amsterdam National Bank as security for a debt of \$11,500; one other automobile not in the bill of sale, parts and accessories, \$16,571; furniture and fixtures, \$1,226; machinery, \$1,421; accounts and notes, \$20,762; cash, \$35, and fire insurance. \$350. Among the creditors are the Michelin Tire American Agency, Inc., \$27,433, mostly for loans; the Electric Vehicle Co, \$3,656; E. Lamberjack & Co., \$2,088; H. L. Toplitz, \$1,643, and Pitt & Scott, \$1,353.

Pitts Jailed at Walla Walla.

William H. Pitts is under arrest at Walla Walla, Wash., charged with obtaining money under false pretenses by swindling Fount A. Butcher out of \$50. According to the information Pitts represented himself as the agent of the Northern Motor Car Co., of Detroit, Mich., and as such offered to sell an automobile to Butcher, on which \$50 was paid in advance. This occurred February 15. The warrant recites that Pitts made false statements when he claimed to be the agent for tehcompany, and that he had no connection with the company. Pitts claims that the money was passed on a business transaction and that he had no intent to defraud.

Salzman Leaves Factory for Retailing.

George Salzman, for six years assistant superintendent of the E. R. Thomas factory at Buffalo, has resigned that position to become treasurer and general manager of the American Motor Car Co., of Atlanta, Ga., agents for the Thomas Flyers. Salzman's splendid driving in the recent Savannah road race won him many friends in the South, and the Atlanta company placed a \$65,000 order with the proviso that Salzman be released to take the management of their company.

New Model Comes from Moline.

"Moline Limited" is the style of a new model which has been brought out by the Moline Automobile 'Co., East Moline, Ill., It has a four cylinder, water cooled, 35 horsepower motor; sliding gear transmission with four speeds; 115 inch wheel base; two systems of ignition, magneto and storage battery, and unit power plant with three point suspension. It will retail for \$2.500

What was the Milwaukee Auto Livery Co., of Milwaukee, Wis., now is the Bland-Mueller Auto Co. The necessary certificate recording the change of name has been filed.



WEST INDIAN COMPANY A FRAUD

Jncle Sam so Brands It—Hatched in Connecticut, Its Promoter Spun South American Tales.

The Postoffice Department has issued a raud order against Frederick U. Wells and the West Indian Motor Car Co., which operated at New Haven, Conn. Wells recently was arrested in Kingston, Jamaica, but later was released.

It is stated that Wells procured a charter under the laws of South Dakota and opened an office in New Haven. He advertised for agents, and to persons replying he would represent that his company had a capital of \$500,000, and branch offices in Porto Rico, Jamaica, Cuba, Nassau, Bermuda, Venezuela, Brazil, Mexico, and the Argentine Republic, and that it was in want of agents.

If the person addressed would only be kind enough to remit the small sum of \$100—as an evidence of good faith on the part of the said person—the company would furnish him employment at the salary of \$1,200 per annum and a free ticket to one of the branch offices of the concern.

The persons who sent in money were badly "stung." The company had no capital stock, except that supplied by the various victims; no plant, no offices, no motors—not even a gallon of gasolene. The officers were either fictitious, or tools of Wells, it is stated.

Wells, who appeared to be about 26 years old, first appeared in New Haven last October, saying that he came from East Hartford. He took an office at 902 Chapel street, and immediately started in to boom his "gilt edged enterprise," the "West Indian Motor Co.," which he claimed had \$500,000 capital, and was the exclusive agent for all the first class cars in South America. His plan was to get chauffeurs to go to Jamaica, offering them large yearly salaries if they would buy stock in the company. As a further inducement he offered to give \$500 worth of stock for \$200. He claimed to have a \$100,000 contract with the government to carry mails from San Juan to Ponce by motor car. Wells advertised extensively for chauffeurs and many went up to his office to consider his offer, but it was just a bit too magnetic, and only one or two were parted from their money.

Wells ordered a number of automobiles from the New Haven dealers, for which he is alleged to have paid with worthless checks; the machines were not delivered.

British Business Falling Off.

British trading in foreign cars and parts has undergone a marked shrinkage since the beginning of the year. During the month of March the total imports revealed a drop of no less than \$311,730, as compared

with the corresponding figures of 1907. In all, only 433 complete cars were imported, their combined value amounting to \$775,785; while 282 chassis, valued at \$397,625, and parts to the value of \$712,510, brought up the total to \$1,885,920. The total importations for the first quarter of 1908, consisted of 1,111 cars, 750 chassis, and parts, the valuation amounting in the aggregate to \$4,-990,315. The corresponding summation of last year amounted to \$5,823,835. In the export field a similar falling away has been experienced, though not to so noticeable a degree. During the month of March, 182 complete cars, valued at 0327,303; 20 chassis valued at \$30,975, and \$161,750 worth of parts were exported, thus bringing the total export figures up to \$520,030. The corresponding figure for March, 1907 was \$552,970. The gross exports for the first three months of the year amounted to \$1,-555,640, as compared with a total for the same period last year, amounting to \$1,588,-

Evidence of Trade's Recovery.

Reports from many directions indicate that the automobile industry, generally speaking; has about recovered from the effects of the financial depression and has regained its tone.

As one instance of the fact, on Friday last, the Maxwell-Briscoe Motor Co. received a telegram from the Fernald Automobile Co., its Denver agent, offering \$50 per automobile for a two-carload shipment—twelve Maxwells—conditional on shipment being made within ten days.

"Nor is Denver the only place that is crying for cars. The demand is simply phenomenal," said Benjamin Briscoe, in speaking of the telegram. "I don't know whether we are doing all the business, but I do know we are producing 50 per cent. more cars this year than last and we simply can't keep up with the demand. A few days ago we got a telegram offering \$500 premium for one car load of six machines—a bid that outdoes Denver. Of course we cannot comply. We've put on night forces at our three factories and hope soon to catch up."

Making Mitchell's Big Plant Bigger.

The Mitchell Motor Car Co. is adding two more buildings to its already big plant at Racine, Wis. Of the new structures one is an addition, 100x100 feet, to the machine room, and the other, 130 by 420 feet, is a warehouse, paint department and metal working department. The factory expects to ship 250 Mitchells this month, but is still far behind its orders.

Angus Flirting with Beatrice.

The Angus Automobile Co., which commenced building cars last year in Angus, Neb., already is seeking a new location. It has told the Commercial Club of Beatrice, Neb., that it is willing to be "induced" to remove to that place.

KELLY HEADS A NEW COMPANY

Becomes President of Big Leckport Concern that will Produce Tires—Its Other Officers and Plans.

Charles F. U. Kelly, than whom few men are better known, is no longer sales manager of the Continental Rubber Works, Erie, Pa. After many years of service in the industry he finally has made a change which places him in a position that will give practically free rein to his undoubted resourcefulness and unlimited energy. He has become president of the newly organized Lockport Rubber Works of Lockport, N. Y., which has been incorporated under New York laws with \$300,000 capital.

The other officials are J. Edwin Davis, vice-president; H. M. Wood, secretary. Mr. Davis, who was at one time treasurer of the Boston Woven Hose & Rubber Co., has had 24 years experience in the rubber industry, in both the executive and manufacturing departments. Experienced men for all other departments have been engaged and President Kelly promises that in about thirty days, when deliveries commence, the tire trade will have something to talk about.

The product of the company will include tires of every sort—for automobiles, bicycles, motorcycles and carriages. Hose, belting and a full line of mechanical rubber goods also will be manufactured.

The factory at Lockport has more than 110,000 square feet of floor space, and is thoroughly equipped with new and modern machinery and appliances.

Death of the Senior Grout.

William L. Grout, known in the automobile industry as father of the Grout brothers, of Orange, Mass., and later as active head of the Grout Automobile Co., died at his home in Greenfield, Mass., Wednesday, 22d inst. Mr. Grout had long been prominently identified with sewing machine interests, his first business connection being with Thomas H. White of the White Sewing Machine Co. His most effective work was at Orange in connection with the New Home works, of which he was superintendent, and with which he was connected for 26 years. He had been an invalid for many years.

New Assemblers in Wisconsin.

E. C. Deibler and T. H. Russell have gone into the automobile business in Berlin, Wis. They are assembling cars on a limited scale from purchased parts.

Carriage Company May Build Cars.

The Velie Carriage Works, Moline, Ill., is reported to be contemplating the manufacture of automobiles. The report, however, lacks confirmation.



"Keep Your Eye on Continentals!"

Continental

In the Briarcliff Race.

More Continentals ran through the Race without trouble than any other tires.

The Continental Ready-Flated equipment received unqualified commendation from every driver using it.

The Briarcliff race was the most severe tire test ever held in this country. It demonstrated once more that Continentals, which hold the world's record for long-distance racing, and which have the largest sale of any automobile tire, are the leaders also in reliability and durability.



CONTINENTAL CAOUTCHOUC COMPANY

J. M. GILBERT, General Manager

1788-1790 Broadway, corner 58th Street, New York, N. Y.

BRANCHES:

DETROIT-226 Jefferson Ave.

SAN FRANCISCO-422-424 Van Ness Ave., cor. Ash.

DISTRIBUTING AGENTS:

Acme Rubber Co., 925 Jefferson Ave., Toledo, Ohio.
Centaur Motor Co., 59 Franklin St., Buffalo, N. Y.
Continental Agency Co., 1268 Fuclid Ave., Cleveland, Ohio.
Continental Tire Co., 1200 South Main St., Los Angeles, Cal.
Jas. L. Gibney & Bro., 211 No. Broad St., Philadelphia, Pa.
Neustadt Automobile & Supply Co., 3948 Olive St., St. Louis, Mo.

Plant Rubber Co., 322 First Ave., No. Minneapolis, Minn. Revere Rubber Co., 700 Baronne St., New Orleans, La.
The Post & Lester Co., \$821 Boylston St., Boston, Mass.
The Post & Lester Co., \$175 Asylum St., Hartford, Conn.
Western Continental Caoutchouc Co., 1438 Michigan Ave., Chicago, Ill.



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO,

General Agents: The American News Co., New York City, and its branches.

ETChange of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Pacilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, APRIL 30, 1908

Advantages of Displacement Exemplified.

Even a casual glance at the characteristics of the cars which competed in the Briarcliff race furnishes convincing evidence of the absurd methods of engine rating extant among the makers. It also supplies a good argument for the method of rating by piston displacement. Comparison of the figures representing nominal horsepower with those indicating the piston displacement shows a variation which is too extraordinary to be accounted for by any eccentricities of design. Had not the event been a "stock car race," such differences might have been reconcilable to the desire of certain makers to practice the greatest possible fuel economy, and of others to develop the maximum possible power regardless of that factor. With the limitations which are supposed to exist in the design of engines for touring practice, however, the more charitable supposition of the two which are possible is to credit a large proportion of

the makers with extremely liberal ideas as to what horsepower really is.

Reducing the figures obtainable from the entry blanks to terms of piston displacement per nominal horsepower, it is found that the machines entered had cylinder capacities varying from a trifle over 1½ cubic inches per horsepower up to 3 inches and a little over. To see one car with double the rated horsepower of another, yet with only 5 inches more cylinder capacity at once leads to the conclusion that something is radically wrong with the system of rating, and so far wrong that some remedy ought to be discovered and applied without delay.

It is true that displacement alone is not a measure of the possible performance of the car, nor, strictly speaking of the engine itself except in a limited way. With cars of any given class, however, as in this case, the ratio of engine power to car weight, and of displacement to power output, should be so far reduced to a common denominator as to yield at least one term upon which a just rating could be based The contention frequently has been advanced by the Motor World that the piston displacement furnishes just this desideratum. Certainly it is justified by the results of this contest wherein cars ranging in nominal output from 30 to 60 horsepower, and all designed for touring purposes, or at least for road service, proved to be on a pretty nearly even footing.

The inflexibility of the displacement figure is its greatest advantage. By the ease with which it may be checked, all jugglery is barred, and even though it is not a measure of horsepower it is so nearly a measure of it as to be more suitable than horsepower for use in connection with competitions, as it is for general use in the makers' catalogues. Every man understands the meaning of inches; only the technical understand the meaning of horsepower.

Concerning the Change Speed Gear.

In the location of the change speed gear and its relation to the parts which it connects, a gradual change is taking place which is more general than might be supposed by the casual observer, and none the less marked for being unaccompanied by the trip-hammer racket of press agency. Excepting the question as to whether four or six cylinders are more suitable for use in touring car practice, the industry is at present quite barren of the causes for technical argument which one time furnished it with so much of the spice of life. The situation in

regard to change gear position, is only one of several examples of the newer trend of things in which the owner pays less attention to the design of his car than formerly, and more to its performance. Like the problem of the final drive and the relative advantages of solid and live axle constructions, change gear design is being thought out and worked out slowly, but progressively.

Originally, the change speed gear was an element by itself, like the differential, and independently mounted and controlled. Later, it came to be associated in combination, either with the motor in the unit power plant, or with the rear axle group in the unit transmission. Compactness, interchangeability and facility for making repairs, were the principal causes leading to the adoption of one or the other of these systems until at present, a very important contingent of the makers have espoused one or the other. Without going into their respective merits, it is plain to see further, that both stand on a common footing in that they serve to eliminate the several undesirable features which the independent and centrally mounted change gear develop. Indeed, their increased use as well as the arguments in their favor, appear to point to the ultimate elimination of the latter arrangement.

In either case, the use of a single propeller shaft running a considerable distance is made possible, thus reducing the angular displacement of the universal joints, and so cutting down wear, and the strain on the parts due to irregularity in transmission through the joints when disaligned; in both, the parts are made more accessible, more readily demountable and more perfect mechanically speaking; and in both the use of universal joints between the motor or clutch and gear box, in addition to those between the gear box and the rear axle, is done away with. Another bad feature which is also eliminated is the noise of the gears which, especially in the case of limousine cars, is made particularly objectionable because of the resonance of the body. With the gears mounted in the fore part of the car, or on the axle, where the springs are between them and the floor of the body, the clatter and ringing of the transmission is reduced to an almost negligible degree.

These arrangements are peculiar to the gear driven car, of course, and the tendency to a clearing away of the middle portion of the chassis thus may be said to be peculiar-



ly an effect of the shaft drive. Even so, in one or two cases even the chain driven car has been made subject to a unit power plant design, with only the differential housed in the counter shaft casing, so that the movement cannot be attributed exclusively to that source. The rivalry between unit transmission constructions and unit power plants, has not become as strong as it is likely to within a year or two. But whatever arguments may be advanced in favor of either, it should be borne in mind that they have at least one common advantage.

Earning Customers' Good Will.

When a man spends a sum of money for an automobile, whether the expenditure is \$500 or \$5,000, he expects something more from the agent than the tools and accessories with which the car is equipped. The buyer expects—that the expectation is justified—that the dealer from whom the car was bought will have sufficient interest in the welfare of his patron to sincerely cooperate with him to the end of obtaining the best results in the use of the new car.

While any salesman will answer the questions which may be asked him by the buyer, too often the latter has so little knowledge of the mechanism and design of his new car that he fails utterly to bring up the questions that are of first importance. The result is that he experiences a number of mishaps which easily could have been guarded against had the interest of the salesman, in the welfare of his client, been sufficiently sincere to have prompted him to do a little more than was asked by giving the customer enough time and attention to properly instruct him in the construction and operation of the car.

It is short-sighted policy on the part of a dealer to strive merely to get a customer's money. His good will is valuable and while "hell hath no fury like a woman scorned," the automobile agent has no critic like the neglected customer.

Automobile dealers would do well to adopt the policy of one of the best known and most popular of legislators. He was approached one day by a constituent and asked for a card of admittance to the floor of the senate. By way of complying, he made out two cards, which he handed to the applicant, with the terse remark: "You may want to use both." As the recipient of his favor passed out of hearing, the legislator, turning to his friend who had witnessed the occurrence, said, "when I gave him one card, I gave merely what he asked for and

what he was entitled to, and he accepted it as his right; when I gave the second card, which he had not asked for, he appreciated my interest in him and felt under obligation to me. I find it a good principle to do a little more than is asked of me."

Problems of Commercial Vehicles.

Manufacturers of commercial motor vehicles are wont to deplore the difficulties in the way of successful operation of their product which are caused by the difficulty of obtaining satisfactory service from drivers. In some cases they even go to a point further and complain of the difficulty of securing competent operatives for the road testing track. Men who are competent to drive and handle cars of any sort, prefer to drive lighter and more speedy machines, they say, and consequently unless closely watched, will tend to shirk their work when put on the commercial machines, and in many cases "pass them up" long before they are in proper working condition, simply from lack of interest in the undertaking. This is doubtless a very real difficulty, but the root of the matter lies not so much with the men themselves as with their em-

As was pointed out in these columns not long since, the user who is unable to obtain satisfactory service out of commercial vehicles which are of standardized make, must be in some way at fault himself, since others, with similar equipments, are able to obtain paying results from their use. So with the producer of the vehicle. If he is unable to obtain faithful service from his test crew and if his customers also complain of high maintenance cost and labor troubles as well, it is more than likely that the difficulty might be solved by a little attention to detail both in the draughting room and the superintendant's office.

The machine which is properly designed according to the best rules of modern practice, such as are available in every wellequipped manfacturing establishment, is not likely to give any great amount of trouble either under test or afterward, so long as it is run under thorough supervision. Provided the design is good, the only other possible cause of trouble in testing must arise through carelessness in assemblage. The car which is well designed and thoroughly built, if tested under a close system should give so little trouble that the work should be in no way repellant to the competent mechanic. Hence, if paid a proper wage, there ought to be no difficulty in securing

COMING EVENTS

April 29, 30 and May 1, Detroit, Mich.—Detroit Automobile Dealers' Association's three days' reliability run to Saginaw, Kalamazoo and return.

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30. Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30. Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

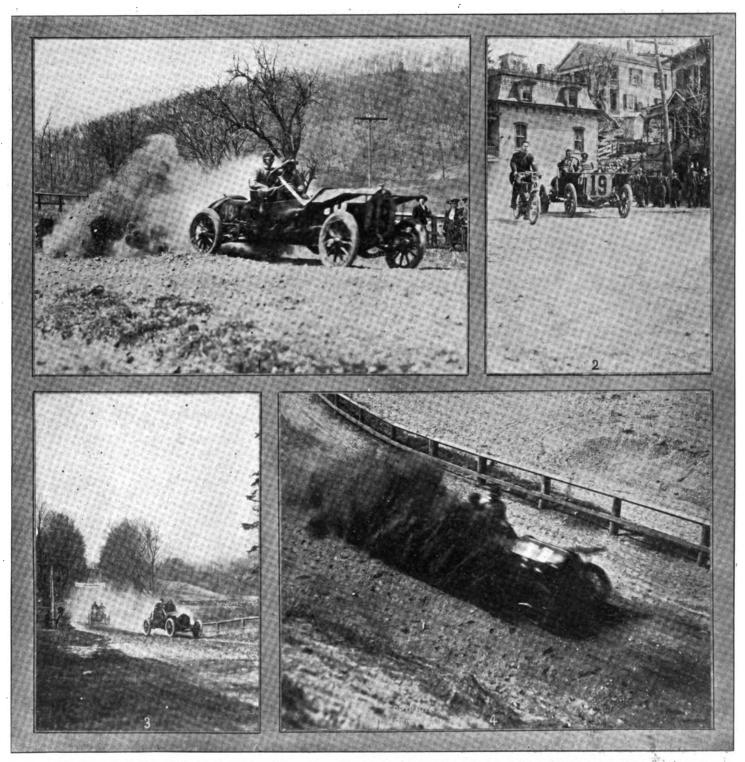
July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

men for the test crew who would work in well.

As for the dissatisfied customer, under these circumstances, there are two possible sources of his discontent. One, that the vehicle is not suited to his needs, and the other, that he is not sufficiently good an executive to develop the proper returns from it. The maker who is sure of his product, should have no difficulty in locating such a fault, nor, if he be at all wise, in pointing it out to the unsuccessful owner. Where complaints of this nature exist, both the cause and the remedy are not far to seek. Generally speaking, the successful maker is not long in ferreting them out and correcting the underlying evil. The maker who, on the contrary, continues to complain of labor troubles or of the thickheadedness of his customers, is pretty apt to be on the wrong track. He should look to his design and to the manner of its execution first, and complain afterwards.



STRANG WINS WHILE MOORE SLEEPS



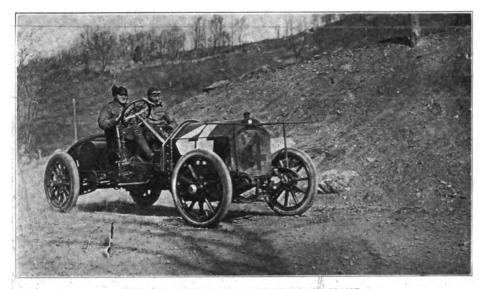
1. HILLIARD "RAISES THE DUST." 2. HOW MOTORCYCLISTS PILOTED COMPETITORS THROUGH MT. KISCO CONTROL. 4. POOLE "SKIDDING SOME." 3. WHEN LYTLE PASSED CEDRINO EARLY IN THE RACE.

God was good on Friday morning last, 24th inst. On that day the first race for the tions, the services of neither the coroner Briarcliff trophy was run over the 32 miles. nor the undertaker, nor even the ambucorkscrew circuit in Westchester county, lance surgeon, were once called into requi-

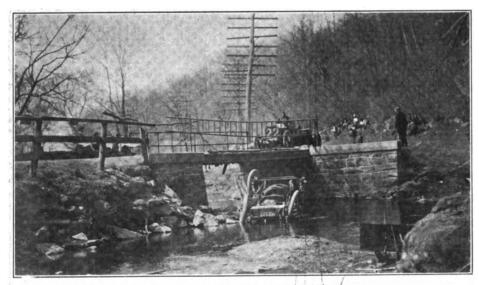
New York, and contrary to all dire predilec-

sition. The absence of serious accident was the most remarkable feature of the day.

The race was won by Louis Strang, an American driving an Italian Isotta car, but



STRANG WITH THE RACE WELL IN HAND.



"THE QUICK AND THE DEAD"—WATSON SPEEDING OVER THE BRIDGE OFF WHICH A CAR PLUNGED THE DAY BEFORE.



THE DRIVER DOES NOT TAKE ALL THE RISKS.

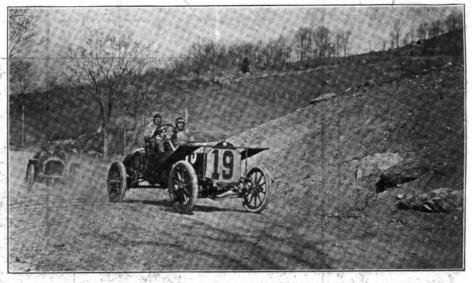
readers of advertisements that since have appeared in the daily press, may be pardoned, if, despite the official record, they have a confused idea as to whom the victory belongs. The importers of the other cars that competed, and at least one American house, have each figured out to their own satisfaction, the marvelous glory that can be squeezed out of a near-triumph, or even out of one that is not remotely near. The figure jugglers and word-compounders have paid large sums for generous space and black type to impress the public with the fact that they did everything but win the cup.

Strang, however, was the only real winner. His victory was achieved on the road and not in the advertising columns. He covered the eight laps-259 miles-in 5 hours 14 minutes 131/2 seconds, an average of about 48 miles an hour-speed which surprised, astounded every one familiar with the twists and turns of the "wriggly" course of indifferent roads. Second was Emanuel Cedrino, on a Fiat car, in 5 hours 21 minutes 53/5 seconds. Strang started fourth and finished first; Cedrino was second away at the start and finished in the same position. The next two finishers were Americans in American cars, respectively, Guy Vaughn, Stearns, in 5:28:293/5, and Herbert H. Lytle, Apperson, in 5:39:153/5.

To whom fifth position belongs is a matter of conjecture. Paul Sartori driving a Bianchi, finished in that position in 5:53:453/5, but J. Morton Seymour, Simplex, drove his car across the finish line shortly after the finish of Sartori, and inasmuch as Seymour started in 21st position, twenty minutes after Sartori, who finished only eight minutes before him, logically the place belongs to Seymour. Following this line of reasoning sixth position apparently should go to Frank B. Leland, Stearns, who started four minutes after Sartori, and finished less than four minutes after the Italian crossed the line. Sartori, who was given fifth position after the premature stopping of the race after this number of cars had crossed the finishing line, apparently should be in seventh place. Whether the position will be changed is a matter for the racing board of the American Automobile Association to decide. It is considering the protests.

A few minutes before Strang dashed over the line that marked the finish, it was announced that after eight cars should have finished the race would be declared over. Strang, Cedrino, Vaughn, Lytle and Sartori finished in succession, and in an instant following the passing of the latter, the narrow roadway was blotted out by the swarming over it of spectators and cars. The yellow flags, significant of danger, were displayed The race was over. At that moment Sey mour and Leland were flying around to ward the finish on their last lap. With the course choked with humanity and machines they had to thread their way to the grand-

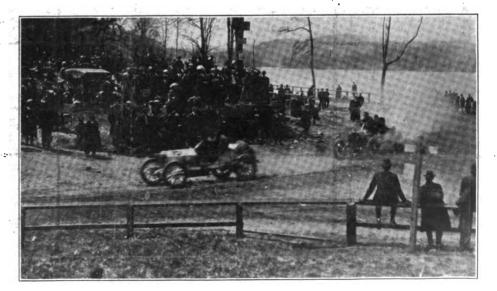
	259.2 Miles.	8 Laps. 5:14:13% 5:21:05% 5:28:29% 5:39:15% 5:39:15% 5:53:45% Soing well when race was stopped.
HOW THE RACE FOR THE BRIARCLIFF TROPHY WAS RUN AND WON.	226.08 Miles.	7 Laps. Pos. 273.47 1 284.17 2 289.39 3 287.36 4 280.50 5 301.03 6 301.03 6 302.20 7 315.44 10 322.48 11 322.48 11 328.14 12 338.35 14 342.36 15 358.03 16
	194.4 Miles.	6 Laps. Pos. 235:04 245:01 3 246:47 2 246:47 2 246:47 2 246:47 2 246:47 2 246:50 7 247:39 4 277:24 10 276:39 11 278:07 12 284:05 14 295:05 15 320:47 16 328:01 17 Kension.
	162 Miles.	5.Laps. Pos. 194-40 1209-32 5 207-35 4 207-35 227-34 10 212-16 6 2112-16 6 2112-18 11 222-3-35 11 222-3-35 15 238-45 11 238-20 11 328-20
	129.6 Miles.	4 Laps. Pos. 15602 1 15602 1 16606 3 16606 3 11600 3 117220 6 17630 8 14600 1 18027 9 18027 1 19000 1
	97.2 Miles.	3.Laps. Pos. 117:23 1 1 1 1 1 25:13 6 1 22:10 3 1 25:13 6 1 25:10 1 25:10 1 25:10 1 25:10 1 25:10 1 25:10 1 25:10 1 25:10 1 25:10 1 25:10 1 25:10 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1
	64.8 Miles.	21.aps. Pos. 78.505 1 85.04 6 85.04 6 85.07 4 90.39 11 80.39 11 80.57 10 85.57 10 85.57 10 95.04 15 92
	32.4 Miles.	11.40 Pos. 33.42 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	Order Start.	428E-127101 ~ E 5 8 8 5 2 4 5 2 5 7 9 0 0 0
	Piston Displ.	82.27848.25.25.28.28.28.28.28.28.28.28.28.28.28.28.28.
		P.5. Driver P.5. H.P. Car. Lewis Strang 50 Isotta 2 Emanuel Cedrino 60 Fiat 3 Guy Vaughan 30 Stearns 4 Herbert Lytle 50 Apperson 5 Paul Sartori 50 Banchi 6 M. J. Seymour 50 Simplex 7 W. Leland 30 Stearns 8 Poole 50 Isotta 9 H. Michener 45 Lozier 1 Barney Oldfield 30 Stearns 1 W. M. Hilliard 40 Hol-Tan 1 J. Bergdoll 60 Benz M. Roberts 60 Thomas Maurice Bernin 30 Renault George Robertson 50 Panhard William Watson 50 Simplex 8 Ralph de Palma 35 Allen-Kington 8 Ralph Mulford 45 Lozier 9 D. S. Murphy 30 Maia 1 Parker 66 Fiat 1 Farker 66 Fiat 1 Farker 66 Fiat 2 E. H. Parker 66 Fiat



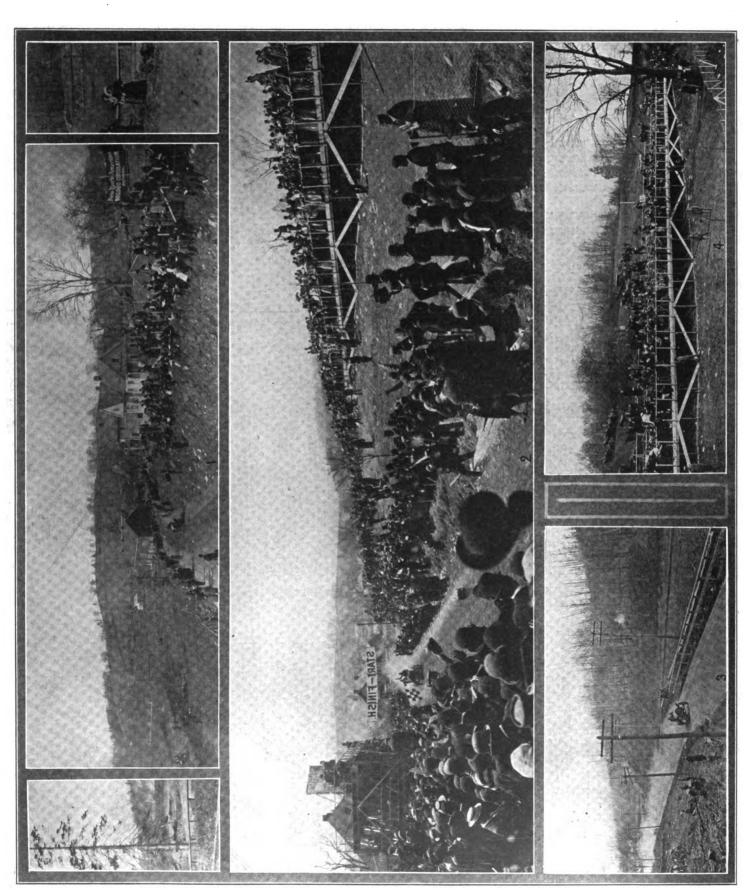
WHEN HARDING OVERHAULED OLDFIELD.



THE WRECK OF A NON-COMPETING CAR.



' CEDRINO ABOUT TO PASS HILLIARD.



2. "STRANG WINS." 4. THE GRANDSTAND FULL OF EMPTINESS.

1. HOW SPECTATORS CROWDED ONTO THE ROAD NEAR THE GRANDSTAND. 3. ROBERTS "LETTING OUT A LINK."

stand, a delaying process that lost valuable minutes for them. Both finished but the officials did not take their times. Why, no one seems to know. Whatever the excuse it would appear that fifth and sixth places, rightly belong to Seymour and Leland, respectively.

It was a remarkable race. Of the 22 starters, only four cars were eliminated. When the seven cars had finished ten were on their last lap, while another, driven by William Watson, who had been put out of the running for a time, was still plugging along, though several laps behind. It is a tribute not only to reliability of the present day stock car construction, but to the careful judgment displayed by the competing drivers. They realized the dangerous nature of the course, and—most of them had relatives.

on private property south of the start and finish line. The noticeable feature of these stands was their emptiness.

So many touring cars and pedestrians were on the course at 4.45 o'clock, the official time for starting the race, that it did not actually begin until more than three-quarters of an hour later. Fortunately, there was not a hitch in starting when once the first car was given the word, and at intervals of one minute the remaining 21 contestants began the long and wearisome ride.

It was exactly seven minutes past five when Starter Fred J. Wagner counted off the seconds and gave the word to Sartori, in the Bianchi. Sartori wore a black sweatmen were attired in white from head to foot, including white helmets, from the peaks of which defiantly fluttered long white streamers. Guy Vaughn and Joseph Crawford, Stearns, were eighth away at exactly 5.14 o'clock. Ralph Mulford was at the wheel of the other Lozier car, which started next, and both he and Harry Cobe, his mechanic, were dressed similarly to Michener and his helper.

Daniel Murphy and J. M. Ulrich (Maja), Alfred Poole and T. M. Pepperday (Isotta), Montague Roberts and A. C. Guichard (Thomas), followed in this order. Roberts and his mechanic attracted as much attention as any crew in the race, not alone from the fact that they wore regulation foot ball helmets on their heads, but because Roberts acquired considerable notoriety for driving the only American entry in the



stand at Briarcliff Manor bore a similarity to the starts of the several Vanderbilt cup races on Long Island in every respect save one-there was not the great crowd at the race as have made memorable the Long Island contests. There were not hundreds of thousands of spectators, and of the total number who witnessed the race, the percentage at the grandstand was smaller than at some other portions of the course. At no time was the grandstand in danger of collapsing from overloading; in fact, few more than the box seats were filled. To begin with it was in a bad location, a half hundred feet back from the road, and people could not be blamed for not paying fancy prices for hard board seats when they could witness the passing of the cars much better from the more comfortable seating of their touring cars. If the grandstands had been moved up the hill 50 yards the spectators would have been able to watch the cars for nearly a mile after leaving the tape, but from information gleaned from disinterested persons it was learned that the ground at the very top of the hill, where the stand should have been, did not belong to the man considerably interested in the contest. What was true of the official

stand half way up the hill is equally appli-

cable, but to a greater extent, to the sev-

eral immense stands that had been erected

The start of the race from the grand-

SIMPLEX SIGNALING STATION.

er and Mevers, his mechanic, looked warm in a rubber coat. Emanuel Cedrino and Carlo Catra next breasted the tape in their red painted Fiat; both men wore helmets and red sweaters, with the name of the car in white letters on their backs. Third away was the high-geared Apperson, also painted red, with Herbert Lytle at the wheel and George E. Davis in the seat beside him. Lytle got a big hand when he threw in the clutch and the big machine started feverishly up the incline. Strang and his Italian car were regarded critically when they came up to the line. This young man had suddenly jumped into fame only a month or so ago when he won the great stock car race at Savannah, and the car commanded notice from the fact that it was rigged up with a peculiar arrangement of gas pipe on the front, which Strang explained was to prevent any stray dogs that happened in the way from being thrown up in his face. John B. Marquis was in the mechanic's seat.

Frank W. Leland and Charles Schlipp, his mechanic, were both garbed in black leather suits, as they brought the Stearns, No. 5, to start. Edwin H. Parker, Fiat, was sixth away. Harry Michener and Anthony Ross presented the most picturesque appearance in the long white Lozier. Both

New York-Paris stunt as far as Wyoming.

Whatever the attention Roberts received from the grandstand crowds just as much was focused upon Barney Oldfield, at the wheel of a Stearns. Oldfield, whose daring on circular tracks has made his name known all over the world, was making his debut at road racing, and there were not a few that predicted his early demise. How well the wise prophets went astray subsequently developed. Besides this fact Oldfield nonchalently chewed a cigar butt, an unfailing habit of his track driving, and braved superstition by driving a car with the number "13" painted on its radiator. Oldfield had trimmed his car with splotches of green paint to make it resemble as nearly as possible his famous old "Green Dragon" car. In the seat beside him was Charles Soules, another famous track driver.

Maurice Bernin (Renault), was the 14th starter, and in succession followed George Robertson (Panhard), with Paul Fleury in the mechanic's seat; W. M. Hilliard and Frank Townsend (Hol-Tan-Shawmut); and Ralph De Palma, who had been substituted as the driver of the Allen-Kingston car after A. C. Campbell, the original nominee, had been injured when the car ran off the course during practice the week before. De Palma was to have been the mechanic, but Rippengill occupied that minor role.

Julian Bloch and Charles Godard (Re-

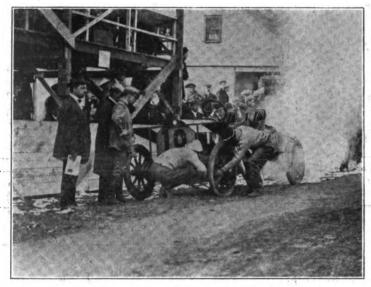
nault), were the eighteenth away, followed by Hugh N. Harding and L. M. Anderson (Isotta); Louis J. Bergdoll (Benz); Morton J. Seymour (Simplex), and William Watson (Simplex). The last car left at twentyeight minutes past five.

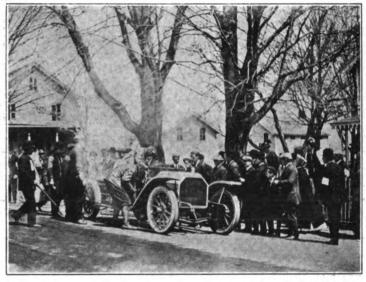
Then the crowd settled down to await results. Predictions were freely made, and one or two bets involving an outlay for soda water were made by excited Italian day laborers that Cedrino would be the first to pass the grandstand at the finish of the first lap. From Briarcliff to Kitchawan is 6 miles, and to Pine Bridge 7 miles, while Mt. Kisco, where the only control was situated, and through which the cars had to take ten minutes to pass, is 11 miles from

in the first round. The road at East View describes what might be called a continuation of nightmareish curves and then some. The twists looked easy from the top of the hill, and one would not know the difference until the centrifugal and centripetal forces began a duel when the car started to wiggle around them. Most of the drivers realized the danger at this point and slowed up before they struck the loops. William Watson, the last man to pass on the first round, didn't, however. The preceding cars had worn a rut in the roadway, and when Watson came whizzing down the hill and ran onto the first curve the outside wheels of his car settled into the rut. Watson instinctively knew that

two minutes back of him, Sartori. The crowd saw some action when a tire of Sartori's machine gave way, just after passing the stand. In order came Parker. Vaughn, Murphy, Poole, Leland, Mulford, Michenor, Oldfield, De Palma, Seymour, Hilliard, Robertson, Harding, Roberts, Bloch, Bergdoll, and Bernin—all save Watson, the first unfortunate. Next to Strang, Seymour made the most sensational run, covering the lap in 39:56, actual time, and jumping from next to last position at the start to 14th place at the ending of the first round.

One or two flashes of near excitement amused the spectators during the early hours of the race. One came when the sheriff of Westchester county made a raid





HILLIARD PUNCTURES AT GRANDSTAND.

LELAND STOPS FOR REPAIRS.

the start. It was thought that the first telephone bulletin would be sent from Mt. Kisko, but the first of the meagre reports that finally reached the official stand was that Vaughn had passed Michener at Armonk, 17 miles. The next announcement was that Cedrino had passed Sartori at Valhalla, 22½ miles. Soon after it was heard that Cedrino, Sartori, Lytle and Strang had passed East View, 26¼ miles, in this order.

Perhaps the most dangerous turns of the course were at East View, where also was a railroad crossing, which was blocked every once in a while by a slow moving special train from New York. Incidentally, these special trains of the New York Central and Hudson River Railroad broke all speed records in getting to the course. Briarcliff Manor station is only a few more than 30 miles from New York City, but it is an actual fact that the train which left Grand Central at 3:15 a. m., did not reach Briarcliff until exactly twenty minutes after seven o'clock.

Because of the serpentine twists of the course just south of East View several thousand spectators, in search of thrills, congregated at this spot. The most spectacular accident of the very few in the race came

he was "in bad" and threw on the brakes, but the speed was too great to be overcome in an instant. As the car reached the curve and the front outside wheels jammed against the rut it was natural that the opposite side should begin to rise, following the first principles of motion. Watson realized his danger and cut out power entirely. The instant he did so the car was describing a flip-flop, and Watson and William Cotter, his mechanic, were looking for a soft landing spot. They found it, and the car settled down bottom side up. Later Watson got the car righted and started in the race, but it was after half-past eight when he passed the grandstand the first time, the leading cars at that time being on their fourth round.

Strang must have done some fast driving in the 6 miles from East View to the grandstand. At that place he was in fourth position, and passed the other three cars before reaching Briarcliff for the ending of the first lap. He passed the stand at 5:59:42, having taken 49 minutes 42 seconds to cover the 32.4 miles, which, deducting ten minutes for the Mt. Kisco control, made his actual time for the lap 39:42. Lytle was only 18 seconds behind. Three minutes later came Cedrino, going great guns, and

on the gambling lay-outs that had been set up back of the press stand. The cappers were "roping in" a lot of innocent countrymen when the big sheriff and his bristling black moustache took a hand in the game. The fakirs were run off the course and the sheriff and his deputies amused the crowd by smashing the rough pine tables with axes.

The militiamen who had been enlisted to keep the course free of spectators were more in the way than of real service. Most of them were mere boys, who apparently had small idea what they were there for. At one time when some one passed a bottle of beer among several of the "volunteers" stationed at the grandstand and, not being used to such strong beverage before breakfast, they began to think themselves excruciatingly funny, and amused themselves by hitting bystanders toes with the canes with which they had been "armed" by the promoters of the race. One of the youngster guards-they were not in uniform-got into a fight with Magistrate Kernochan of New York City and was belaboring him over the head with a cane when District Attorney Jerome, who was with the magistrate, interposed. The over-zealous "soldier" guard received a black eye.

This incident almost started a free-for-all fight among the guards until several uniformed Pinkerton men put the entire company of soldiers to flight. A few minutes before this incident Starter Wagner got into an argument with a chauffeur who wanted to cross the road. The two began pummeling each other until spectators interposed.

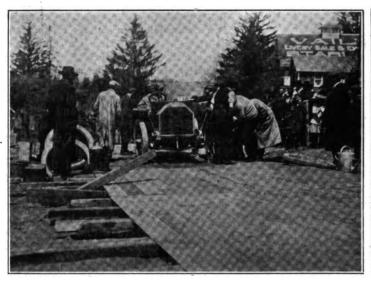
After the first round Tom Moore, the manager of the race, crawled into a tonneau of a friendly car and went to sleep. He slept like one exhausted, undisturbed by the intermittent thunder of the cars as they rolled past. It was no wonder, for Moore and Robert Lee Morrell, who promoted the race, were not sure until the last

that lap being by Strang, in 38:23. Seymour, in the Simplex, had jumped into second place in point of time, with Lytle third and Vaughn fourth. Harding stopped his Isotta car at the grandstand with a flat left front tire. The young Englishman and his mechanic made a remarkably fast replacement in just 2 minutes 21 seconds. In the third round, covered by Strang in 39:18, Seymour still held second position, but Vaughn passed Lytle, and thus moved into third place.

The first real excitement occurred in the third round when four cars came down the winding hill toward the grandstand together. Harding headed the procession with Mulford nosing him closely, and Par-

mud and viewed their lost chance. It was on the fourth round also that Parker (Fiat) retired with a broken rocker arm of a cylinder.

The positions of the three leaders—Strang, Vaughn and Lytle—were not changed in the fourth lap, but the succeeding round brought a shift, Vaughn relinquishing third place to Poole (Isotta), while Lytle moved into second place. Cedrino (Fiat) was fifth in both the fourth and fifth rounds. The fifth round also marked the retirement of two other cars, Mulford's Lozier and De Palma's Allen-Kingston. Both Michener and Mulford had tire trouble in the early laps, the former replacing three tires, while Mulford had to put an entire





OLDFIELD CHANGES A TIRE.

POOLE RUNS INTO TROUBLE.

minute that the race could be run. They satisfied State Engineer Skene, who wanted cash to indemnify the State for damage that the race might cause to the roads, and it was not until late the day before the race that his demands were satisfied. Then on top of that came the announcement that the village of Greenburg had unintentionally been left out of the bond that was to indemnify the towns along the course in case of any damage caused by the race. Personal bonds were given until a cable could be sent to London to insert the name "Greenburg" in the papers. Then it is said that Moore and Morrell did not pull very well together the last day before the race, and, in fact, had had some words. So it is no wonder that Moore slept.

When Strang passed the grandstand at the ending of the second lap at 6:48:02, his total time for 64.8 miles being 1 hour 18 minutes 5 seconds, and when he still held the leading position at the finish of the third and fourth rounds the spectators began to realize that barring accident, Strang would likely prove the winner. The fight was for second place, and in the scrimmage for this position was found the only excitement of the race.

All the cars save one made the second round without incident, the fastest time for ker and Oldfield were only a few yards behind. The last named made a daring swerve and passed Parker directly in front of the stand, a little byplay that caused the spectators to rise and cheer the veteran circuit chaser. This was the one illuminating incident of the race, as viewed from the grandstand.

While the cars were on the fourth round the news sifted in to the grandstand that the front wheel of No. 10 had collapsed at the schoolhouse corner, but that no one was hurt. No. 10 was Murphy's Maja. Later it developed that Murphy's over-ambitiousness to pass Sartori on the serpentine East View hill had brought about his undoing. It happened very near the spot where Watson's Simplex had turned turtle in the first lap. Sartori came shooting down the hill and close behind him was Murphy. It occurred to the Irishman that he would pass the Italian right on the curve—an attractive idea that didn't work. On the skidding side was a ditch and beyond that a stone wall. Murphy jammed the brakes when the car began to slide and this saved it from gointo into the wall. It took the ditch, however, and the one of the front wheels collapsed. Murphy exercised his vocabulary to a considerable extent when he and his mechanic picked themselves out of the soft new equipment on. The fact that he had to do it entirely with the aid of his mechanic as the mishaps occurred some distance from a Diamond tire control, naturally made him lose much valuable time. After replacing the fourth tire, Mulford's mechanic started to crank the car, when the engine back-fired. The starting crank knocked the mechanic unconscious and he remained in that state for more than ten minutes. After that Mulford retired.

Shortly after feaving Armonk the right front tire of De Palma's Allen-Kingston gave way and before he could recover the car had run off the road and over a water culvert. The culvert bent the axle to such an extent that steering was impossible and De Palma was out of his first automobile race.

It was in the sixth round that Cedrino began to set a fast pace. Up to this time he had been driving a conservative race, but in the sixth round he took all kinds of chances. His dare-devil driving was apparent for he worked up to third position at the end of that round, Strang and Vaughn preceding him. Cedrino's time for the sixth lap was 37:16, the fastest lap of the race up to that time. Poole was fourth and Lytle fifth. Seymour, Leland and Sartori followed in order, and then came Harding.



Michenor, Oldfield, Hilliard, Bloch and Bergdoll, in this order.

Cedrino's fast driving in the seventh round landed him in second place in that lap, having passed Vaughn, in the Stearns. It was just 10:53:47 o'clock when Strang passed the grandstand on his last lap, a big green flag giving him the signal. Strang slowed down somewhat for he knew he had the race won then; but not so Cedrino. The Italian flew around the dangerous curves with reckless abandon, resulting in the fastest time for a single lap in the last round, his time being 36:483. At the eleventh hour, by the way, the distance was reduced from ten laps to eight.

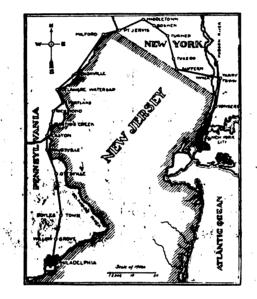
According to official time it was 11:44:131/5 when Lewis Strang crossed the finish line, having covered 257 miles in 5 hours 14 minutes 131/2 seconds, far better time than any one had thought possible. Less than five minutes later Cedrino thundered past. At two minutes past twelve Vaughn's time was taken, and Lytle in the Apperson followed six minutes later. It was nearly 21 minutes past noon when Sartori finished and the instant he had crossed the line the crowd broke loose, despite the announcement made a few minutes previous that the times of the first eight cars would be taken. The guards and officials made no attempt to hold them in check and the result was that Seymour and Leland, a few minutes behind, but coming on fast, had considerable difficulty in reaching the stand at all, so congested was the course with cars and pedestrians. Both the American cars that finished were fitted with Diamond tires.

The aftermath of the race took the form of the usual round of complimentary dinners, which were genuinely full of thanksgiving, because the contest passed over without a serious mishap. The first of the "spreads" took place at Rector's on Saturday night, when Guy Vaughn, Barney Oldfield and Frank Leland were wined and diner and promised special watches each, as testimonials from the firm whose cars they drove. The largest gathering assembled at the Hotel Astor on Sunday night, when 46 banqueters told Fred J. Wagner, the official starter, what a "good fellow" he truly is. In proof of their esteem they presented "Wag" with a gold split second watch. But Chairman Robert Lee Morrell came in for one of the largest wine-sprinkled bouquets that was thrown: He was referred to as the "Little Napoleon of American automobile racing," which made the Briarcliff race worth all it may have cost him. It isn't often that a driver is banqueted when he has not done anything but that was what happened on Tuesday, when a dinner was given in honor of Arthur Campbell, who was put out of the race before it was run by the upset of his car and breaking his jaw. The amusing part of it was that Campbell was still in the hospital at White Plains and so could not join in the festivities in his honor.

BOW TO AVOID NEW JERSEY'S GRIP

Johnston Discovers a New Route to Philadelphia — Longer but Far More Beautiful than Old Way.

Senator Frelinghuysen, having decided that no native shall use the roads of the State—into which he goes for the purpose of legislating when his business and home cares in New York City will permit—without paying heavily for the supposedly inherited right to use the public roads, and that no non-resident shall ride in New Jersey without paying a heavy admission



fee and securing a passport, may live to see the fruits of his "shakedown." Already they are beginning to ripen.

The Federation of American Motorcyclists had planned to spend a day on the roads of New Jersey during the annual meet in July, but since the passage of the Frelinghuysen amendments, New Jersey has been abandoned. Long Island will derive the benefit of the motorcyclists' patronage. The motorcyclists cannot see the wisdom of requiring their visitors—many of whom may never enter New Jersey again —to pay \$2 for the privilege of a few hours' sojourn in that State.

Another result of Frelinghuysenism which will be appreciated by the New Jersey hotel keepers is that a route has been found to Philadelphia and other points which avoids the necessity of passing through the State which claims from \$5 to \$19 for the privilege of using its roads, whether for but one day or 365 days. To that indefatigable tourist, R. H. Johnston, who is chairman of the Good Roads Committee, is due the discovery of the new route which skirts the northern boundary line of New Jersey and then crossing from Port Jervis. N. Y., into Matamoras, Pa., goes in almost a straight line to Philadelphia. So far as beauty of scene is concerned, the new route is so very much more picturesque than the shorter road through New Jersey that the latter is not to be mentioned in the same breath. The accompanying map shows the route. Johnston describes his "voyage of discovery" as follows:

"Leaving New York in our 30 horsepower White steamer, we first proceeded to Tarrytown. Here we were ferried across to Nyack on the opposite shore of the Hudson. The ferry runs on practically an hourly schedule, the fare for car and passengers being \$1. From Nyack we continued almost due west to Suffern, and then, turning north, we continued up the beautiful Ramapo valley, passing through Tuxedo and Southfield to Turner. Here we turned from the main north-and-south route and struck out toward the west. We made quick time through Chester and Goshen to Middletown where, turning to the southwest, we traveled via Otisville and Huguenot to Port Jervis. Much to our surprise, we found the roads up to this point almost perfect."

"At Port Jervis we crossed the toll bridge over the Delaware River and entered the State of Pennsylvania. Then commenced our ride down the valley of the Delaware. On one side of the road rise towering cliffs, strongly suggestive of the Palisades and doubtless of the same geologic origin. Far on the left, on the other side of the river, may be seen the hills of inhospitable New Jersey. The scenery is as fine as can be found anywhere within a day's ride of New York, barring, of course, the Hudson River scenery.

"We spent the night at Milford, 104 miles from New York, and the next morning comtinued down the valley. Thirty-three miles below Milford we came to the Delaware WaterGap, where we lingered for an hour or so enjoying the beauty of this great natural curiosity. Fives miles below 'The Gap,' at the town of Portland, the road leaves the river and then come ten miles of road where we found the first waterbreaks seen on the trip. At Martin's Creek, the road again comes back to the river's edge, and there is a fine eight mile stretch of macadam to Easton, and this river road continues another twelve miles south of Easton. Then the road bears inland and thereafter we did not again see the Delaware. After leaving the river, the scenery becomes rather uninteresting and the road is of varying character. But as one nears Doylestown the good roads begin again, and a fine macadam highway led up through Hatsboro, Willow Grove and Jenkinstown; and then along the York road into North Broad street, Philadelphia.

"We had started only with the purpose of finding a good route to Philadelphia which would not pass through New Jersey. Not only had we fully succeeded in this task, but also we had found as interesting a two-day tour out of New York City as the most exacting tourist could ask for. On the entire 225-mile trip, we found only about 30 miles of poor roads."

ONE MORE USE OF THE MANOMETER

As a Speed Indicator It Fooled the Fledgeling Cop—How It Measured the Car's "Mileage."

"That article in last week's issue of the Motor World headed 'Varied Uses of the Manometer,' recalls a funny incident that happened to me last summer," remarked a professional chauffeur. "I found use for the manometer one afternoon which is not spoken of in the article referred to, and while my tale will sound highly improbable it nevertheless is true and can be vouched for by four people who were in the car with me at the time of the occurrence.

"I was driving a Panhard at the time. The manometer on the car had been out of adjustment for several weeks and when the engine was at rest the indicator would point to about 2 instead of 0—which was a fortunate thing for me," chuckled the speaker.

"On the afternoon in question I was indulging in a joy ride' with friends as passengers; we were going along one of the suburban streets at a pretty good clip when suddenly there appeared before me a youthful cop, who, with outstretched hand, signaled me to pull up. I obeyed the order and was informed that I was under arrest for exceeding the speed limit."

"The cop was little more than a kid and the newness of his uniform together with his very apparent air of serious responsibility, convinced me that he was new to the force, hence it was likely he could be bluffed. Anyway, as no harm could result from attempting to bluff him I concluded to try it.

"How fast was I going?" I asked.

"Eighteen miles an hour," was the response, as he looked at his watch as though for verification of the statement.

"Sure?" I queried.

"Sure," he responded, good naturedly. "Didn't I hold a watch on you?"

"During the conversation I had stopped the engine.

"Well, if you want me to go to the station house, I'll go, but I'm giving it to you straight, that when the sergeant sees my speed indicator he'll give you the laugh and turn me loose. Do you know anything about automobiles?" I suddenly asked, and without waiting for his reply, I continued: This is a French car, and that thing there-I pointed the the manometer-is the most perfect speed indicator in the world. You can see for yourself that there are no wheels or clumsy mechanism connected with it-just a pipe that goes straight to the engine. And you can't change that to save your life," I added in a tone of conviction.

"The cop was interested and I saw that I had him guessing. We were alone on the

road; no rubbernecks had come up to listen to the discussion, and my chances to win out were good.

"Do you see that hand?" I asked himpointing to the indicator which was stationary and pointing to a spot a little less that 2. "Well that shows the fastest speed I've gone to-day, and there's no way of setting it back either. You see it points to a little less than 2 manometers, and a manometer is just six miles. The fastest I've gone to-day is about 11 miles, and any man who understands automobiles will swear to that. Now you take me in and I'll call the sergeant's attention to that manometer and you'll loose your credit for timing automobiles if you make a break like that."

"I was terribly in earnest and appeared so confident that the policeman weakened. He looked about for a minute and seeing that we had attracted no attention from others he concluded that he had made a mistake.

"All right," he said. "Go ahead; you weren't much over the limit anyway."

"I cranked the engine and off we went, happy and suppressing the howls that later rent the air, when the minion of the law was out of hearing. I'm ashamed to confess that later of that same day I drove as fast as 8 manometers an hour."

White Helps Out Wilkes-Barre.

The last obstacle to the annual Wilkes-Barre hill climbing contest was removed this week when Walter C. White, formally withdrew the protest he had made to the racing board of the American Automobile Association in connection with the climb last year. White was barred from the freefor-all event after his entry had been accepted, but as he made the fastest time of the day in a special trial, he put in a claim for the cup. The governing body upheld White and directed the Wilkes-Barre A. C. to award the prize to White. As it already had been awarded to the Matheson, which made the fastest time among the gasolene cars, the club made a compromise with White by presenting him with a gold medal and changing the inscription on the cup to read "the fastest time made by a gasolene car." The last obstacle having been removed the Pennsylvania club will announce the program for this year's climb, which will take place on Giant's Despair mountain on the morning of May 30th.

Strang to Drive in Grand Prix.

By winning the Briarcliff trophy race last Friday Lewis Strang jumped into fame which brought almost instant recognition. He was immediately engaged by Harry Houpt to drive the latter's Thomas car in the Grand Prix race to be run in France early in July, for which task Montague Roberts originally had been chosen. John Marquis, who acted as Strang's mechanic in both the Briarcliff and the Savannah races, also was engaged to act in a similar capacity in the Grand Prix race.

ONLY THREE FAILED TO FINISH

Norristown Endurance Run Proved Mere
Jaunt, and Left Sixteen Clean Scores

—License Plate Caused Accident.

So far as honors are concerned the first annual endurance run of the Norristown (Pa.) Automobile Club from Norristown to Lancaster and to Reading and return on Tuesday last, 28th inst., resulted in a satisfactory evenness which likely will result in the contest being run over. Of the 33 starters, but three failed to finish, and of the remainder, 16 ended the 132 miles run with perfect scores. The trophy is a valuable cup and a meeting of the tied contestants will be held next week to determine the final disposition of the trophy.

The endurance run started from Norristown at 8 o'clock, the route taking the cars over some of the best but hilliest roads in that section of the Keystone State. They all ran upon a time schedule that was easy for the first two stages, one hour and a half from the start to Coatesville and the same time from there to Lancaster, where the dinner stop was made. The roads between Lancaster and Ephrata and the latter place and Reading were such that all of the one hour and forty minutes were needed to get to Reading to Pottstown and from there over the homestretch to the finish.

The run was marked by two accidents, neither of which resulted seriously. One happened to F. M. Jacquith, whose Crawford car was stopped by tire trouble at Great Valley Church. Jacquith stepped back from his stooping position at the rear wheel just as Van Peacock (Packard) came along at a fast clip. A mud guard of the car hit Jacquith and he was sick for some time, but recovered sufficiently to finish the run. As the result of the front license tag becoming caught in the steering gear the Acme, driven by John L. Scull, became unmanageable near Reading and ran into a fence, disabling a front wheel. Scull was not unseated however, and the car was repaired sufficiently to finish the run.

The drivers that finished with perfect scores, and their cars, are:

William P. David, Maxwell; Van Peacock, Packard; D. F. Templeton, Reo; J. Elwood Lee, Cadillac; Frank Stretzinger, Mitchell; Charles Mann, Buick; Frank B. Wildman, Stoddard-Dayton; W. C. Longsterth, Maxwell; J. A. Beidman, Reo; J. E. Mountain, Winton; Walter Cram, Mitchell; Joseph F. Graham, Ford; A. H. Bitner, Rambler; M. B. Brown, Rambler; Harry Greenwood, Premier, and E. C. Benson. Apperson.

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau St., New York City.



FLAG PRESENTATION FOLLOWS FIRE

Stoddard-Dayton Workmen Celebrate Factory's Quick Rise from Ashes—Sentiments that were Exchanged.

That labor and capital peacefully can go hand in hand was exemplified last week when the employes of the Dayton Motor Car Co. presented to their employer the flag staff and flag which waves over the new

we wish all success and prosperity to the company for which we are working."

Mr. Stoddard received the gift and showed clearly his appreciation in thanking the men for this, another testimonial of their good wishes. He said:

"When a few weeks ago we were gathered here watching the lurid flames leap skyward, threatening with destruction this plant, sadness was in our hearts, and when morning dawned and we could see the havoc wrought by the flames, were we



PRESIDENT STODDARD ACCEPTING THE FLAG.

concrete factory which has just been reared in Dayton, Ohio.

Before the smoke of the recent fire had cleared away, the work of rebuilding the Stoddard-Dayton plant had begun. As it began to assume shape, the workmen conceived the idea of signalizing its completion by presenting an American flag to mark the quick rise from the ashes. A committee was appointed to forward the plan, which was carried out without knowledge of the company's officials, until the proper moment.

Then George Harrison, chairman of the flag committee, presented the flag and staff to the company, the flag raising being made quite an occasion. In turning over the flag to J. W. Stoddard, president of the company, Harrison said:

"May the emblem signify that all our requests be made with justice and reason and that we shall seek to secure our rights through peaceable and statesmanlike means. In short, the stars and stripes symbolize the man, who, with clear brain and skilled working hands, is step by step developing a higher and richer manhood. As employes,

downhearted? A hundred times No. Every man of you responded to the call and with unswerving loyalty threw himself unreservedly to the task in hand with the result that within two days we were again producing the best car that money can build. In accepting this flag it is my desire that as often as we see it wafted to the breezes it may remind us that our interests are common, we must be partners in the business, and with each one being fair and honest with the other, the kindly spirit existing to-day will live on and on."

The Loaning of a Garage.

When the manufacturers at Walla Walla, Wash., recently decided to hold an exhibition there to stimulate interest in home products, they were in a quandary for lack of a suitable building, until the Inland Auto Co. turned over their garage for the purpose. The show lasted three days and music was furnished afternoon and evening. Bread-making contests and baby shows were special features, and although automobiles are not produced in Walla Walla, the company made the most of the occasion.

HERE'S SUBSTITUTE FOR "TAXICAL"

It Comes All the Way from China and Affords a Choice Mouthful—Chinese as
Inventors of the Taximeter.

Company promoters who are in doubt as to the proprietary strength of the word taxicab, well may avoid all chances of infringement by having recourse to the significant and euphonious term "giligulicha." It would appear that the term is perfectly justifiable under the circumstances.

In an "Oriental contemporary," the Scientific American has discovered a statement to the effect that "the Chinese can prove, from one of their old richly illustrated historical works, that already in the eleventh century they were using a 'giligulicha' (or counting mile drum car) "which possessed many taxicab features.

"Judging from the several illustrations of the 'giligulicha,' contained in the famous 'Tsan-thu-hae' collection of pictures, the vehicle had one single pole or shaft, ran on two wheels and consisted of two stories," it is explained. "In each of these compartments or divisions ther was a wooden figure holding a mallet in the right hand; these mallets were arranged to strike upon a drum in the lower story, and upon a gong in the upper one. When the vehicle had traversed a certain predetermined distance, the lower figure struck the drum with its mallet, whereupon a cog-wheel made a revolution. When a distance of ten miles had been covered the upper figure struck the gong with its mallet. In some cases this Chinese taximeter car was also fitted with a compass which, owing to the total lack of landmarks and signposts, was of great value to the Celestial 'chauffeur' of that time. A magnet was also provided: it was located in a small box. and influenced a block upon which there was fastened a small jade or wooden figure the outstretched arm of which always pointed due south."

Keeping Tabs on Municipal Cars.

Municipal automobiles in the city of Glasgow, have been more or less subject to the nocturnal abuses which have been supposed hitherto to be a purely American characteristic in this connection, or so it would appear from the recent announcement of a proposed reorganization of the city's motor service. Hereafter, each car will bear the words, "Corporation of Glasgow," conspicuously and permanently displayed, while each will also be equipped with a speedometer and odometer. Every driver will be required to maintain a regular log book, and "show cause" for every mile traveled. Furthermore, the mileage will be debited to each department, in common with the cost of operation. ["New York (N. Y.) papers please copy."]

WORM DRIVE FOR ELECTRIC CARS

This, and Other Innovations Mark Maxim's

Most Recent Creation—How They are

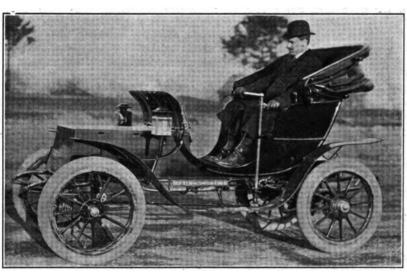
Put into Practice.

Whatever may be said of the degree of individuality still apparent in the construction of other types, electric vehicles have come to be standardized to so high a degree that even a comparatively slight deviation from common practice is at once marked as conspicuously radical. On this account the long-promised Maxim-Goodridge electric victoria phaeton, which is distinctly novel

formed is unusually compact, as shown in the accompanying illustrations, both individually and assembled in the car. Furthermore, it possesses the advantages of eliminating the necessity of using countershafts, chains, strut rods, and housings or adjustments for such parts, all of which are in addition to the benefits in smoothness of action and noiselessness due to the use of the increasingly popular worm drive, which is here used for the first time in electric vehicle practice.

In connection with the arrangement of the transmission, the design of the rear axle is remarkable in that it is "cranked" in order to furnish the rigidity and simplicity of the ordinary dead axle, together the arrangement of the entire vehicle, which is noteworthy for the absence of undermechanism, as well as for the uniformity of the clearance. The only visible under parts are the transmission unit, which, as before indicated, is completely housed, and the steering connections, in addition to the axles and the two stub driving shafts with their universal joints.

Another unusual feature of the machine is the method of placing the battery, which is mounted in a single group under a hood, in front of the dash board, and on the chassis level. This arrangement not only provides for convenience in handling the cells, but has been adopted, as is explained, as the only available method of equalizing



MAXIM AND HIS NEW CAR

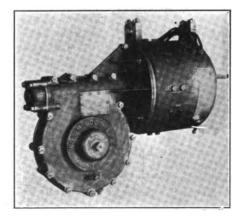
C 6352

NOVEL REAR AXLE CONSTRUCTION

in several respects, is destined to attract no small amount of attention. In fact its expected advent has been awaited with no little interest ever since Hiram Percy Maxim, one of its inventors, severed his connection with the Electric Vehicle Co., and joined with T. W. Goodridge in forming the Maxim-Goodridge Co., of Hartford, Conn., whose first product, the phaeton in question, has just been completed.

Differing in a number of points from ordinary practice, perhaps the most striking departure from precedent is found in the transmission details of this vehicle. A single driving motor is employed, which is of the iron-clad type, placed with its armature running lengthwise of the car. The entire gear reduction, which is of 10 to 1, is secured by means of a worm and gear transmission, which is housed in a divided casing secured to the motor housing, the entire group being suspended from the chassis quite independent of the running gear. The drive to the rear wheels is established by means of two differential stubs which are coupled to the ends of the differential within the housing at one end, and to the wheels at the other. Each of these shafts is provided with two universal joints, to correct for disalignment due to spring oscillation. The motor and transmission unit thus

with the mechanical advantages in other respects of the live type. Instead of being cranked downward in the center, however, as is done in certain systems of axle-mounted transmissions, the main portion of the axle is bent forward of the housing which covers the driven and differential gearing, thus affording ample room for spring mo-



MOTOR AND TRANSMISSION

tion without any possibility of "grounding" the transmission on the axle.

The high road clearance which this construction permits, is further carried out in

the weight destribution on the front and rear axles. Instead of a variation in axle load whereby the rear axle is given some 60 per cent. of the total burden, the excess load on the rear axle is claimed to be only 35 pounds when two passengers are in the seat.

This equalization of weight, as well as the long wheel base (84 inches), and the use of very long springs, makes the vehicle sufficiently easy riding to permit the adoption of solid tires. The wheels are 32 inches in diameter, and $3\frac{1}{2}$ -inch tires are applied, whether of the solid or pneumatic type.

The unusual nature of the machine as a whole is completed by the adoption of a special and original type of controlling mechanism which centers about a single column mounted at the left side of the seat and running down outside the body. This comprises the steering post to which the horizontal tiller is attached above, and also an external sleeve, worked by a short handle under the tiller and actuating the controller. This arrangement does away with the need of disturbing the seat construction in order to permit the erection of the usual vertical controller handle, placing the entire controlling mechanism out of the range of possible accidental disturbance when the machine is at rest. The manner in which

this feature has been worked out is apparent in the accompanying picture which also shows Mr. Maxim in command.

The standard equipment comprises a 30-cell, 11p.v. Exide battery, General Electric motor, and new style "uninterrupted torque," multiple series controller, affording 5 forward speeds and 3 reverse. The total vehicle weight with this battery equipment is 2,100 pounds, and the maximum speed is 18 miles per hour. On ordinary road surfaces a 50-mile radius is possible with either solid or pneumatic tires. On city pavement the radius is correspondingly increased.

Safe Guarding the Steering Connections.

Failure of the steering connections through the giving way of one or another of the ball and socket connections, though comparatively rare, is sufficiently serious in its nature-even as a remote possibilityto be carefully guarded. In a very few instances the makers make some provision of this nature in the design of the connections. In the majority of cases, however, either a great amount of wear in the joint, or the breaking of one of the arms close to it, is liable to wreck the machine. As a measure of precaution, it is possible to attach a couple of clips to the rod and arm, just back of each joint, connecting them with a helical spring of sufficient strength to hold up the rod in the event of failure in the joint, or to use a plain wire connection of a similar nature Another possible method of protection, which in many respects is even better, is to use a protecting boot for the joint, which is made of heavy leather, and is so secured that in the event of the failure of the joint the rod will be kept from falling. The looseness of the connections in such a case will give immediate warning of the need of bringing the car to

Care that the Hub Caps Require.

That the large ornamental hub caps with which most automobiles are equipped, have a purpose, aside from serving as ornamentation, is not known by all drivers. While these caps add to the general appearance of a car, they have also to do with the lubrication of the wheels, and their utility as a reservoir for grease probably is more the reason for their use than is the fact of the attractiveness to the eye.

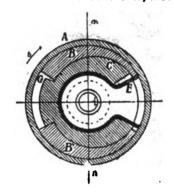
When putting a car in commission, and occasionally, say every month or two, the interval depending on the amount of use the car is given, the hub caps should be thoroughly cleaned out, all the grease and verdigris removed, after which the caps should be repacked. It also is well to clean out the hubs and bearings, washing them thoroughly with gasolene so that dirt and grit will be dislodged. When this has been done, the moving parts should again belubricated, the hubs caps put back in place and the car can be driven without fear of trouble from improperly lubricated axles.

THE MOTOR WORLD

ADAPTATION OF THE CONE CLUTCH

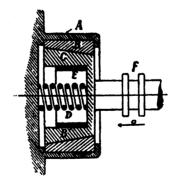
Foreign Device Which Incorporates a Double Wedging Action—Other Features that are out of the Common.

Although the principle of the plain cone friction clutch has proved to be successful insofar as the ordinary driving action is concerned, numerous devices exploiting other principles, as well as the many modifications of the cone principle itself, attest to the fact that when it comes to the action of engagement, the simple type, common as it is, leaves much to be desired. Of the modifications of the cone idea, not a few



involve a reduplication of the wedging action which is achieved in the plain cone. Of these, one of the most recent to appear in foreign practice is the Michel clutch, which has recently been introduced in France by the Ateliers Rondet-Schor, of Paris.

The Michel may be described briefly as a cone clutch of the ordinary type, but of small diameter and heavy construction, in which liners are interposed between the male and female members. Instead of being circular in section, these are of tapering thickness, and made to correspond with



similar tapering seats in the male member of the group. The effect upon entering the principal member is first of all, that of engagement between the driving and driven elements in the ordinary way. The contact thus secured is not sufficient to secure a positive contact, however, and a small amount of slip occurs. This is sufficient to cause the liners, of which there are two, to creep along the surface of the male cone sufficiently to cause their enlarged por-

tions to jam the two elements firmly together with a powerful wedging action. This method of contact, while affording an absolutely positive and non-slipping connection between the elements, would be useless for the purposes of the motor car builder, were not the male member also coned in the direction of its length, as already indicated. This permits the mechanism to be disengaged at any time, and with no more than the ordinary tendency to seizure.

The general arrangements of the parts may be seen from the accompanying illustrations, which show the parts in end and side views. At A, is the outer casing of the device, corresponding to the fly wheel in the ordinary car clutch. The male cone, C, instead of being concentric with its axis, is made partially eccentric, and is shaped to receive the two liners or shoes, B, B', which are of aluminum, and faced with fiber contact strips. The usual helical engaging spring, D, is mounted within the device, as in the ordinary type of "inverted" cone clutch. A plate spring at E, serves to limit the travel of the liners in an elastic manner, while the stop, G, on the cone C, prevents the lower of the two shoes from exceeding its proper length of travel.

When the fly wheel or drum is turned in the direction of the arrow, the motion to engage, which merely serves to seat the cone, C, does not secure the positive driving connection because of a slight amount of play between the shoes and the drum, A. There is enough friction between the shoes and the inner surface of the drum to drag the former around the cone by a very slight amount, this motion being resisted finally by the spring, E. The effect is to wedge the parts firmly together, but with a gradual action which invariably requires a certain amount of time, and therefore invariably prevents straining the transmission. The rate of engagement is regulated to a certain extent by the quality of lubricant with which the outer casing is filled, a certain mixture of kerosene and heavy oil of just the right consistency being employed. As a safeguard against seizure of the parts, it is evident that the withdrawal of the cone in the direction of its axis may be accomplished at any time and with a comparatively slight amount of resistance, which is completely overcome the instant the clutch leaves its seat.

To Brighten the Aluminum.

For brightening the appearance of motor base, transmission case and other aluminum parts, this mixture is recommended by one who has used it:

This brightens the aluminum work, giving it a finish like new, but in using the preparation, care should be exercised not to get any of it on the iron or steel work, and it should be applied only with a bristle brush.



FRELINGHUYSENISM IS IN FORCE

New Jersey's Amended Law Operative, but Licenses not Ready—Temporary Receipts and Other Expedients Used.

Although the fact is not generally understood among motorists the new amendment to the New Jersey law, framed by the New York City representative in the Senate of that State, already has gone into effect. Like the original Frelinghuysen act, to which it is an addition, it contains many more or less involved provisions which will cause the Department of Motor Vehicles and motorists generally much annoyance unless thoroughly understood.

As soon after the law was signed and new stationery and blanks could be obtained the various agencies of the department started to issue temporary licenses which are only makeshifts until the provisions of the law can be complied with exactly. Unfortunately, the amendment did not set some future time at which it shall go into effect, thus giving the department a chance to understand its provisions thoroughly and to get in readiness to enforce them. In consequence the department has developed a temporary system which is working well.

Until the new license tags issued by the State are received, which will certainly not be before the 5th of May, the department issues a receipt to each motorist desiring to license a car not already recorded and assigns him a number. This number he may display on his machine in any legible way he choses until the tags arrive, while the receipt is accepted in lieu of a regular license.

When the license tags are received by the agencies of the department, holders of the receipts must call and receive a regulation license and two tags, which must at all times be attached to cars while operated in the State. Licenses issued now are good only up to December 31 of this year, when they must be renewed.

The new license tags now being manufactured and expected to arrive the second week in May, are blue in color, with white lettering. They will contain the license number of the machine in numerals four inches high with one-half inch stroke; the characters "N. J." and "'08," and a blank space will be provided in which will be stenciled the manufacturer's number of the car for which the license is issued. Each agency will be provided with a stenciling machine, and as a number is assigned the man taking out the license will be required to make affidavit as to the correct number of the car.

As each license issued under the old law is renewed a new number will be assigned and the requisite tags issued to accompany it. No numbers under 38,000 will be given out, so that those members of the

Jersey motoring fraternity who have prided themselves upon possessing some of the early numbers will boast no longer.

A feature of the law which is finding little favor is that requiring that there shall be no transfer of licenses from the old law to the new—that is, if a man wishes to sell a car licensed under the previous act, he will be unable to transfer his license to the new owner by payment of \$1 as formerly. The new owner will have to take out a license under the 1908 law as though the machine had never been licensed. If, however, a car has been licensed since the new law became operative, then its license may be transferred as before by payment of the \$1 fee

A provision which will work hardship in many cases requires that licenses under the old law expiring before January 1, 1908, shall be renewed up to December 31, 1908, at the new schedule of license fees, ordinarily required for a full year's license. An example will best show the working of this. If a man registered his car November 31. 1907, under the old law, that license is recognized up to November 31, 1908, but on that date a new license must be obtained under the provisions of the Frelinghuysen amendment just passed. This amendment, however, stipulates that every license obtained on November 31, 1908, for which full license fees were paid, becomes void on December 31, and the motorist must pay for one month's use of his car the license fees usually exacted for a full year.

Many motorists thought, after reading the provisions of the amendment, that if their cars were registered previous to June 1 of this year they would not have to display the license tags issued by the State. But such is not the case. The law is a trifle ambiguous in one place, but goes on to order definitely that after June 1 only the State tags be displayed on all cars, no matter when registered. These will be furnished by the State, without added cost, when the licenses are issued.

Motorists Escape Massachusetts Squeeze.

For the present year Massachusetts automobilists escape the additional taxation that Governor Guild thinks they should bear. In spite of the report, "no legislation made to the House of Reprenecessary," sentatives by the committee to which the Governor's recommendation was referred, an attempt was made to "squeeze 'em again," by the substitution of a bill based on the Governor's suggestions. When the bill came up for discussion Representative Bennett of Springfield described it as "Soak 'em legislation," and others joined him in such vigorous opposition that the vote was overwhelmingly in the negative. If was brought out in the course of the debate that automobile owners paid over \$92,000 into the State treasury in the past year, and that the sum will be larger the present year under the present scale of

NEW YORK'S BILL FAILS TO PASS

Suddenly and Unexpectedly Abandoned by Senator Armstrong—Motorists Thereby Saved from Their Friends.

Despite the efforts of the automobilists themselves, that is, those represented by the New York State Automobile Association and Mr. Shattuck's club, the Automobile Club of America, they will not be able to pay \$5 or \$15 per year for the right to use the public roads of New York State, nor will they be able to obtain the distinction of being posted throughout the State as criminals if they are somewhere convicted of violating any of its provisions. They must needs content themselves with having paid \$2 at the time they purchased their cars, whether last year or four years ago. Also, they must be satisfied to carry but one tag on their machines, and when arrested, be content with having the record of arrest made in but the place where the offense was committed. All this is to say that the new automobile bill, fathered by the Association and more or less graciously approved by Mr. Shattuck and Lawver Niles, who thought the size of the fees provided was entirely too small, was abandoned by its sponsor in the senate, Senator Armstrong.

The reasons which prompted Senator Armstrong to withdraw his support at the eleventh hour from the measure which he had introduced in the upper house, are not known. His action in abandoning the bill came as a complete surprise to those who had been concerned in the preparation of it, for it was confidently thought that it would be passed without change or amendment or serious opposition.

One of the results of the Senator's action will be to continue in force the present speed limitations, much to the distress of Shattuck, Niles & Co., and some others who had concluded, after much anxious thought, that unlimited speed was good not alone for them, but for the public at large.

But the bill is dead. The legislature adjourned on Thursday last.

Two Days in Jail for Missing 2.

Over the head of Talbot C. Walker, of San Francisco, a junior in the Sheffield Scientific School, Yale University, there is hanging a sentence of two days in jail at New Haven, Conn. He remains at large pending an appeal of his case. The charge on which he was convicted was that of obscuring the number on his automobile, from which the figure was missing with the result of making the number 405 instead of 4052. In court at New Haven on Monday, 27th inst. Walker pleaded that the missing figure 2 had accidentally fallen off, but evidently the claim was doubted.



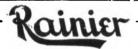
This is the



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.



1908 Model D. 50 H. P.

Ne. factory, Saginaw, Mich.

Complete catalogue now ready.

RAINIER MOTOR CAR COMPANY,

New York.

LOGAN TRUCKS MAKE AND SAVE MONEY

Investigation will convince you.

Write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chillicothe, O.



INVADER

Boston Branch Motor Mart Bldg 87 Church St.

New York Carford Motor Car Co.

CHAS. F. KELLOM & CO., Philadelphia. Pa.

"AURORA"

Runabout \$775—20 H. P. Commerciai Wagon \$1000—20 H. P.

Live proposition to agenta.

AURORA MOTOR WORKS.

Aurora, Ill.



THOMAS THE

America's Champion in the New York-Paris Race. Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

Better Because Regular

Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St. Syracuse, N. Y.

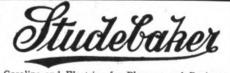
McCORD LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY

NEW YORK OFFICE—24 Breed Street. Old Colony Building, CHICAGO.



Gasoline and Electric-for Pleasure and Business Studebaker Automobile Co., South Bend, Indiana

TRUFFAULT-HARTFORD

SHOCK ABSORBER

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department I. HARTFORD SUSPENSION CO., E. V. Hartford, Pres.

66 Vestry St., New York



DECARBONIZER

The Great Gas Engine Cleaner Increases power 30-25 per cent. and removes Carbon from all parts of engine. Sample Quarts \$1.50. Discount to the trade. Agents wanted. \$0,000 Users guaranteed.

General Accumulator & Battery Co. 140 becond bt., MILWAUSEE, Wis.

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD

FIRESTONE TIRE & RUBBER CO., Akron, Ohio

Before You Buy a Car

telephone a Mitchell agent and tell him you want to be shown the "silent argument" the Mitchell offers in demonstration. He'll be glad to show you—call him up—it's worth money to you if you are thinking of buying an automobile. (No obligation.)

MITCHELL MOTOR CAR CO., 281 Mitchell St., RACINE, WIS.

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name.

Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



STA-RITE"

THIS

equal to any \$1.50 plug. Has big air chamber, pro-ceed potcelain, bronze non-sticking bushing, won't ak.—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price-\$1.00.

THE R. E. HARDY & CO., 86 Watts Street, New York City

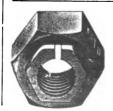


How Are Your Batteries? A CONNECTICUT VOLT AMMETER WILL TELL YOU

Guaranteed, and the price is right, send for catalogue and trade discounts.

CONNECTICUT TELEPHONE and ELECTRIC CO., Inc. Meriden, Conn.





Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts

COLUMBIA NUT & BOLT CO.. Inc.. Bridgeport, Conn.

The Week's Patents.

879,512. Internal Combustion Engine. John Braunwalder, Chicago, Ill. Filed May 16, 1906. Serial No. 317,046.

1. In a rotary gas engine, a plurality of rigidly connected pistons, adapted to rotate concentrically about a common axis, in combination with a cylinder mounted upon each piston and means for controlling the radial positions of said cylinders.

879,610. Vehicle Tire. Perry E. Doolittle, Toronto, Ontario, Canada. Filed May 17, 1904. Serial No. 208,368.

1. In combination with a vehicle wheel carrying a collapsible tire, of an auxiliary wheel rim carrying a tire and detachably secured in a lateral position upon the vehicle wheel.

879,726. Gas Engine. Joseph S. Benson, Iowa City, Iowa. Filed Aug. 2, 1907. Serial No. 386.852.

1. In an internal combustion engine, a cylinder, a crank casing, a transfer port for conveying an explosive charge from the crank casing to the cylinder, a rocker valve arranged in said port, a half time shaft, a valve actuating means operable from said shaft and serving to move the valve to open position once during each two revolutions of the crank shaft, and means for disconnecting the operating mechanism and locking said valve in open position to permit operation as a two cycle engine.

879,763. Explosive Motor. Carl R. Gergler. New York; N. Y. Filed May 28, 1907. Serial No. 376.048.

1. In explosive motors, a cylinder and its piston, said cylinder being provided with an exhaust port above the piston when the latter is at the limit of its explosive stroke, and a manually operated valve for closing said exhaust, said valve comprising a siubstantially U-shaped ring, the inner face of the ring being provided with openings adapted to register with the exhaust part of the cylinder.

879,989. Internal Combustion Engine. Herbert G. Underwood, New York, N. Y. Filed Oct. 25, 1905. Serial No. 284,271.

1. In an internal combustion engine of the compression type, the combination of a working cylinder; a piston; a tubular support carried by the cylinder head and projecting into the clearance space, said support being in permanently open communication at two points remote from each other with the interior of the working cylinder; and a gas occluding body located within said supports and adjacent the upper end thereof.

880,195. Tire Attachment. Edward Col-

lins, Ekalaka, Mont. Filed Sept. 13, 1907. Serial No. 392,764.

An attachment for vehicle tires comprising a band encircling the tire, said band being triangular in cross section with its apex notched and outwardly presented, and fastening bolts passing through the band into the tire, said bolts having their heads fitting in the notches in the band, and shaped to extend flush with the apex and the sides of the band.

880,196. Battery. Frank A. Decker, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed March 21, 1904. Serial No. 199,304.

1. The combination of a conduit, a socket intersecting said conduit, a tube extending into said socket, and a nut engaging said tube and having a passage therein through which said tube and conduit communicate, substantially as specified.

880,202. Automobile. Allen H. Dingman, De Haven, Pa., assignor of one-half to John Sauers, De Haven, Pa. Filed June 13, 1907. Serial No. 378,842.

1. In a vehicle steering gear, a wheel hub embodying a metallic housing closed at the outer end and open at the inner end, dowel pins carried on the inner face of said closed end, a spindle inclosed by said hub and having a head on its inner end having openings to receive said dowel pins, a screw passed through said closed end into said spindle, a swivel-joint support mounted on said spindle, and provided with diametrically opposed apertured lugs, connecting rods pivotally attached at their outer ends to said lugs, means connected to the inner ends of said connecting rods for operating the same two oppositely disposed and vertically aligned bearing pins carried by said swivel support having bearing sleeves surrounding the same, and an axle bifurcated to form arms at its outer ends, the said arms being secured to said bearing sleeves, and said axle supporting the inner ends of the connecting rods and the operating means therefor.

880,212. Means for Preventing Side Slip of Motor Vehicles. Thomas B. Heathorn, Knightsbridge, London, England. Filed November 11, 1907. Serial No. 401,690.

1. An apparatus for preventing side slip of motor or other road vehicles comprising rollers with helical ribs or projections adapted to engage the surface of the road and means for supporting the rollers in contact with the road surface.

880,257. Shock Absorbing Device for

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

W ANTED—First class shop man and adjuster; one familiar with Stoddard-Dayton and Packard cars preferred. Good wages to steady married man. DE-RIGHT AUTOMOBILE CO., Omaha, Neb.

STODDARD-DAYTON—We have stored in Paris a 1907 touring car in fine condition, full equipment for touring. Will sell or trade for a Stoddard-Dayton in the United States. THE DAYTON MOTOR CAR CO., Dayton, O.

OR SALE—1907 Pullman runabout or surrey, detachable rear seat, 4 cylinder, 30-35 H. P.; victoria top; Sprague's folding front. Five gas lamps and generator. All metal parts nickel plated. Tires, Goodrich, Bailey tread. Tires and car good as new; car run 900 miles. Reason for selling, have ordered new 6-cyl. Pullman. Car cost new \$3,000; price, \$1,250. Address Post Box 448, Harrisburg, Pa.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade two and four cylinder motors, 10 to 45 horsepower. They are equipped with self-contained oiling system and ready for attaching magneto. Highest grade workmanship, efficient, durable and simple. Also clutches and trans-Send for catalogue.

CONTINENTAL MOTOR MFG. CO., Mastegen, Mich.

K. FRANKLIN PETERSON, Western Representative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.



Vehicles. Lewis C. Welch, Oakland, Me. Filed Aug. 9, 1907. Serial No. 387,886.

1. In a shock absorber for vehicles, the combination of a cylinder, a piston therein, by passes extending from one side to the other of the piston and designed to vary the resistance to the passage of liquid as the position of the piston changes and a pneumatic cushioning device associated with the piston for assisting in absorbing the shocks.

880,267. Power Transmission Mechanism. Jonathan U. Baker, Stoutsville, Ohio. Filed July 19, 1907. Serial No. 384,558.

1. In a power transmission device, the combination with a driving shaft, of a driven shaft, a friction disc mounted for rotation upon each side of said shafts, a pair of friction cones mounted to rotate with the driven shaft and adapted to engage said friction discs upon opposite sides thereof, and a friction cone rotating with the driving shaft and adapted to engage and impart rotation to said discs.

880,289. Headlight for Automobiles, etc. William D. Forbes, Morristown, N. J. Filed May 18, 1907. Serial No. 374,418.

1. The combination of a vehicle having steering wheels and a swiveled headlight with a spring tending to turn the headlight in one direction and a flexible connection to the steering wheels in the opposite direction.

880,332. Wheel Rim for Pneumatic Tires. Charles S. Scott, Cadiz, Ohio, assignor to Frank A. Seiberling, Aurora, Ohio. Filed March 19, 1907. Serial No. 363,269.

1. The combination of a vehicle wheel rim having a depressed groove near its detaching edge, an inextensible rim flange sliding over the groove onto the rim, a split locking ring sprung into the groove, and a radial projection rigidly secured to the locking ring engaging a recess in the groove to prevent circumferential motion, substantially as described.

880,367. Battery. Frank A. Decker, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed May 9, 1905. Serial No. 259,564.

1. In a battery, a cell having a base, an insulating conduit connected with said base, a plurality of compartments connected to said conduit, electrodes in said compartments, depression in said compartments which receive the bottoms of said electrodes, a conducting device extending through said base in registration with each of said depressions, and a conducting device attached to the exterior of said base in contact with each of said first conducting devices.

880,368. Battery. Frank A. Decker, Philadelphia, Pa., assignor by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed March 21, 1904. Serial No. 199,303.

1. In an electrochemical apparatus, an electrochemically active part having a honeycombed construction on each side thereof providing a comparatively larger fluid contact surface within comparatively limited borders, substantially as specified.

880,382. Power Transmission Apparatus. Charles R. Keith, Tarrytown, N. Y., assignor of one-half to John William Mason, Tarrytown, N. Y. Filed April 3, 1907. Serial No. 366,171.

1. In a power transmission apparatus,

clutches, bars for shifting said clutches, a controlling lever operable to slide either of said bars, and a spring having a projection rigidly fixed thereto directly engaging the said bars for holding them at the forward and rearward and intermediate positions of their movement.

880,403. Motor Vehicle. James Ritchie, New York, N. Y. Filed May 16, 1907. Serial No. 373,905.

1. In a motor vehicle, a driving shaft provided with a clutch section, a hollow shaft thereon, a clutch section slidable on the hollow shaft for co-operation with the other clutch section, and means for moving said clutch section, comprising an annular flange in connection therewith and having oppositely beveled edges, a bracket slidable transversely of the shaft, and provided on each side of said shaft with an extension, said extension having beveled edges and engaging the opposite beveled edges of the flange, and means for moving the bracket.

880,450. Steering Gear and Axle for Automobiles. Maurice P. Henvis, Norfolk, Va., assignor of one-half to Ephraim Ball, Norfolk, Va. Filed Oct. 11, 1907. Serial No. 396,966.

1. A device of the class described comprising a sleeve adapted to mount the wheels for rotation outside of the hubs and ball bearing means for said sleeve adapted to angularly position said wheels.

880,461. Wind Guard. Henry H. McGiffin and Edward H. McCauley, Pittsburg, Pa., assignors of one-third to James P. Brennan, Braddock, Pa., one-third to W. L. Elford and one-third to said McGiffin, Pittsburg, Pa. Filed Aug. 28, 1907. Serial No. 390,536.

1. In a wind guard, a U-shaped glass frame grooved on its inner face, a grooved bottom bar having sockets for the ends of said frame, an attaching plate, and means for pivoting said bottom bar to the upper edge of said plate.

880,470. Carbid Cartridge. Edwin M. Rosenbluth, Philadelphia, Pa. Original application filed March 9, 1907, Serial No. 361,562. Divided and this application filed Aug. 6, 1907. Serial No. 387,279.

1. In an acetylene gas generator, the combination with a casing; of a carbid chamber; and a removable carbid receptacle having a chamber provided with an enlarged region arranged to prevent the improper insertion of said receptacle in said casing, substantially as set forth.

STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Workmanship is superior.
lier. Design more attractive.
stronger. Stewart Model \$40.
Guaranteed Absolutely for Five Years.
STEWART & CLARK MFG. CO.,
509 Diversey Boulevard, Chicago, U. S. A.

AJAX WRAPPED TIRES

Guaranteed for 5,000 Miles Riding Write for copy of Guarantee

AJAX-GRIEB RUBBER CO.
General Office, 57th St. & Broadway, New York
AGENTS IN ALL LARGE CITIES





is the Best Selling Motor Buggy on the market.

> \$375 and upwards.

Dealers can make quick sales with this machine. The upkeep is very light; has solid rubber tires; goes through deep mud and sand, and climbs steep hills. Double cylinder, air cooled, 10-12 H. P. It's your loss if you don't get the agency. Write,

W. H. KIBLINGER CO.,

Box 250.

AUBURN, IND.

WEBER PORTABLE TRUCK TURNTABLES For Automobiles

All other Turntable Trucks are Infringements We Own the Basic Patent



The U. S. Courts have just declared our Patent good and valid in suit against the Pike's Peak Manufacturing Co. We have started suit against "Norwood" for infringing. The only sure way of buying an Auto Turn-Table or Truck is to see that they are branded "The Weber Portable Turn-Table Truck.

Headquarters and all orders to be sent to

THE WEBER CYCLE & SUPPLY CO. Kiowa St., Colorado Springs, Colo No.6 East Kiowa St.,

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

SINGLE CYLINDER CADILLAC
showing actual cost of maintaining their cars.
It also contains much advice of value to the
automobile buyer. Ask for free copy of automobile Booklet No.

CADILLAC MOTOR CAR COMPANY, Detroit, Mich. Member Assn. Licensed Auto. Mfrs.



THE INDE IS RIGHT

Built to outweer an auto, and

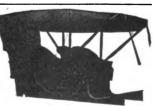
Index Speed Indicator Co. MINNEAPOLIS, MINN.

MORGAN & WRIGHT TIRES ARE GOOD TIRES

SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies** SPRINGFIELD METAL BODY CO.,

366 Birnie Ave...

Springfield, Mass.





A.O.SMITH CO.

High-Grade Axles



Pressed Steel Frames Steering Columns Transmissions Stool Stampings of All Kinds

Send Prints for Estimates

243 Clinton Street.

MILWAUKEE, WIS.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. Prices, \$850, \$1,250, \$1,500, \$2,00. Jackson, Mich.

JACKSON AUTOMOBILE CO.

Bodies Repaired, Trimmed and Painted.
Chassis Repair Department.
J. M. QUINBY & CO.
Automobile Body Builders.
Newark, N. J.

Car Motor Accessories

Spark Plugs, Cable, Switches, Lempa, Horna, Goggles, Auto Clothing and Wet Weather Equipment of our own manufacture.
New illustrated catalogue fre

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Stee! Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



For catalogues, address THE CONTINENTAL AUTO MFG. CO.

For catalog, address Dept. 16. NORDYKE & MARMON CO. INDIANAPOLIS, IND. (Estab. 1851)

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

To Owners of Cars **Costing Over \$1800**

Add the neat, snappy little Brush \$500 Run-about to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit



TYPE C 50 HP

2800 LBS 2800.00 WITH MACKETO 3000.00



Luxurious and Completely Appointed

PENNSYLVANIA AUTO MOTOR CO.,

Bryn Mawr, Pa.

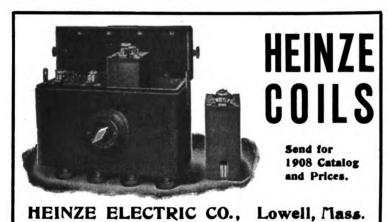
THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

IOL	one	year,	commencing	with	tne	IBSUE	OI_
Na	me_						

Address







NEW SENSATION

Equip your car with

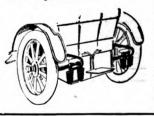
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

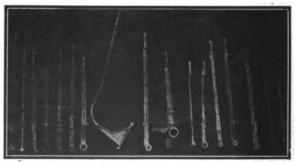
for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch Removed to New York Meter Mart Bldg.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, Philadelphia, Penna.

COMPLETE COURSE AUTOMOBILE INSTRUCTION

Invaluable to the owner or prospective owner of a motor car. Practical and to the point. of a motor car. Practical

Correspondence School of Motor Car Practice Tarrytown, N. Y.

RANKLIN Automobiles

Which do you want—weight or ability? The Franklin catalogue tells you; and tells you why. Write for it.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

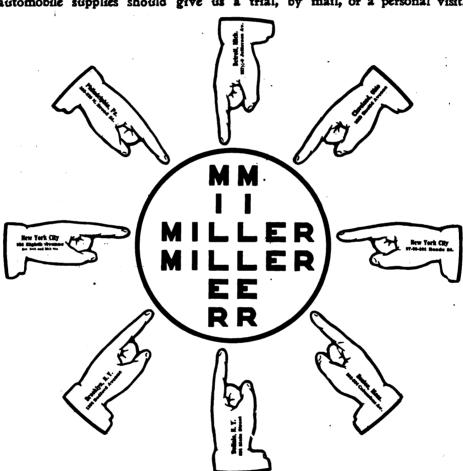
Why not equip your car with a Splitdorf Coil and be totally free from all ignition troubles?

TRY MILLER

This expression has developed into a trade term

THERE'S A REASON

The public, which in the past, has experienced difficulty in obtaining automobile supplies should give us a trial, by mail, or a personal visit.



We Carry in Stock the Largest Assortment of PARTS, FITTINGS AND SUNDRIES

To be Found in this Country

Our Catalog, the most complete one of its kind, is an encyclopedia of motor car supplies; it is used daily by other supply houses and they could not get along without it. A copy mailed to any one on request.

Order from nearest Branch and save time and express charges.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

HCME OFFICE: 97-99-101 Reade Street,

RES

NEW YORK CITY

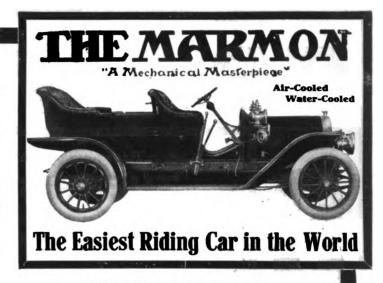
ORES

The Marmon's ease of motion makes it the one car for the man of family. It enables a woman to tour any distance without exhaustion or injury.

The Marmon's distinctive ease of motion, ease of control, ease of steering, perfect lubrication, and many other vital advantages, are due to patented features, which deserve an inspection from every prospective automobile purchaser.

The man who knows and appreciates mechanical excellence will find more of it in The Marmon than in any other automobile.

45-50 H. P. Touring Car, . 45-50 H. P. Roadster, 3500 35-40 H. P. Touring Car, 3000



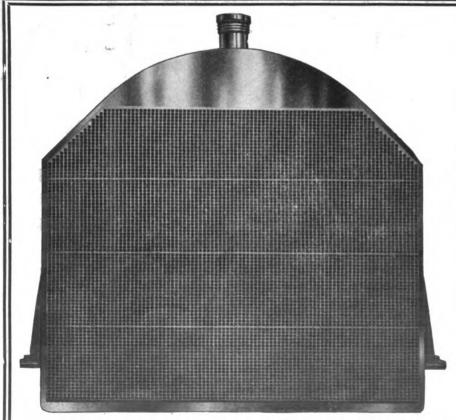
For catalog, address Dept. 16 Nordyke & Marmon Co., (Estab.) Indianapolis, Ind.

Boston, Mass., F. E. Wing Motor
Car Co., 12 Columbns Ave.
Philadelphia, Pa., Brazier Auto
Works, 38th and Market Sts.
Baltimore Md., Snodeal Automobile
Co., 2552 Madison Ave.
East Orange, N. J., Ruckey Machine
Co., 92 Eaton Place.
Mitwawkee, Wis., John Ure, Jr., &
Co., 172 12th St.
Indianapolis, Ind., H. T. Hearsey
Vehicle Co.

St. Louis, Mo., Van Automobile Co., 4700 Washington Ave.
Pittsburg, Pa., Pennsylvania Auto Co., Hay St. and Kelly Ave., Wilkinsburg.
Waterloo, N. Y., Waterloo Automobile Co.,
Binghamton. N. Y., Heller-Spawn Motor Car Co.
Los Angeles, Cal., Big 4 Auto Co., 110 East 9th St.
W. S. Bruce Co., Memhhis, Tenn

Desirable Territory for Dealers.

Note List Above



It's not what we say, but what Mayo Radiators have done, that has led to their adoption by America's best cars.

I"What's worth doing at all is worth doing well," is the policy on which Mayo Radiators were built and will continue to be built.

■ Largely increased facilities enable us to take on a few new customers of the kind that place quality before price.

(The Mayo Radiator is The Quality Radiator.

If you are a Quality Maker better write us at once.

> HONE YCOMB, CELLULAR OR FILAT TUBE TYPES.

MAYO RADIATOR COMPANY, New Haven, Conn.

VICTORY FOR

Bosch Magneto

AT BRIARCLIFF

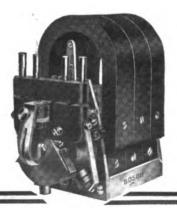
18 out of 22 cars entered in the Briarcliff Race were equipped with the Bosch Magneto. The entire American Crew — 100% — used the Bosch Magneto.

This is an unprecedented demonstration of the wonderful efficiency of this Ignition System. It means that 18 manufacturers and their drivers out of 22 considered it to be the only reliable system obtainable. It means that the Bosch Magneto should be on every automobile whether for city use, touring or racing.

The Bosch Magneto is to be found on the winning car of practically every important racing event the world over, and is part equipment of the Thomas, Zust and Protos Cars in the New York to Paris Race.

BOSCH MAGNETO COMPANY

160 West 56th Street NEW YORK



THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



A TOURING CAR IN THE TRUE SENSE OF THE TERM

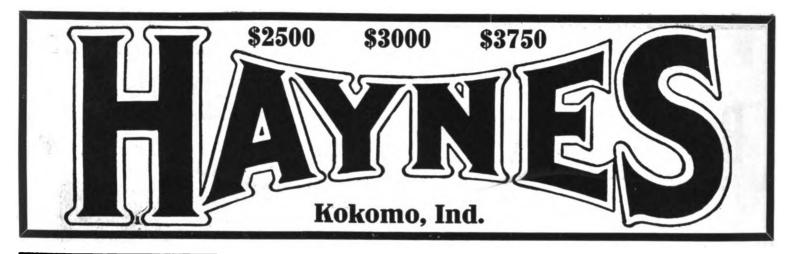
The man who gets the most pleasure from his touring car is not the man who limits his touring to the macadam roads; for the most interesting sections of the country and those of the greatest natural beauty lie, for the most part, beyond the regions of improved highways. For that reason, there is no quality of a motor car more important than the ability to traverse had roads.

In unique degree, the White possesses the qualities of a "bad roads" car. Owing to the perfect flexibility of the engine, the White tourist can accommodate the speed of his car, yard by yard, to the condition of the road, speeding up on each little stretch of good road, and slowing down for each hole and "thank-ye-ma'am"—without shifting of gears or any manipulation except of the throttle. The tremendous pulling power of the White engine under all conditions means immunity from getting stuck in the mud or sand. Running through deep water, as in fording streams, is easy for a White. And as for climbing grades in mountainous regions—there is no other machine which can approach the White in hill-climbing qualities.

Drive a White Steamer and see the country

THE WHITE COMPANY CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1750 Market St. Philadelphia, 629-33 N. Broad St. Pittsburg, 138-148 Beatty Street.



Here's a Record Breaker!

DURING the months of January, February, March and April, 1908, one dealer in the middle west sold Rambler automobiles to the value of \$127,325.93.

There is a big opportunity for substantial business men to add greatly to the volume of their business by selling Rambler automobiles.

More business of all kinds is being done in the middle and southwest to-day than in any other section.

Right now Kansas City, perhaps the choicest location of all, is open for the sale of Rambler automobiles.

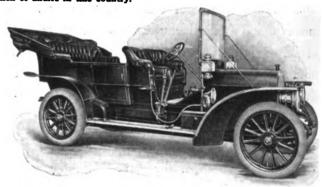
The Rambler sales agency proposition is reciprocal and is bound to interest any wideawake business man.

Write for particulars now.

Thomas B. Jeffery & Company
Main Office and Factory: KENOSHA, WISCONSIN



Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sta.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE Trado Mark Registered April 39, 1895



SIMPLE AND ABSOLUTELY AIR TIGHT

Schrader Motor Tire Valves, as shown in cut, are the regular equipment for & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tire Manufacturera

Manufactured by A. SCHRADER'S SON., Inc., 28-30-32 Rose St., New York

Maxwell"

Why Don't Dealers Make More Money?

It seems too bad, but it's a fact just the same—and you, Mr. Dealer, and I, might just as well be frank in discussing it—that the Dealer has had to carry the heaviest load and take most of the risks in this business during its period of development; and on the whole he has been a loser.

Few dealers have made money — you know that, and I know it. I deplore it — but facts are stubborn things.

There have been many reasons—incompetence on the dealer's part in many cases—an unsatisfactory product in more; and you have all had dealings with the maker who would not do his part—would not back up his cars when they failed to meet his glowing promises.

But underlying all these is a cause which, until it is eliminated, must always produce the same effect.

The automobile industry will never be on a firm footing until the maker can count, from year to year, decade to decade, on the same sales organization.

This cannot come to pass until some plan of operation—or rather co-operation—has been devised which will insure to the manufacturer the loyalty of every dealer in the field, and to the loyal dealer a share in the proceeds of the manufacturer's success.

Now I believe the sales organization is the key to success in this business. I believe it is the manufacturer's safeguard—the customer's mainstay.

I have given much thought to the solution of this problem. As a net result I have a remedy—to quote our friend from Boston.

No, I'm not going to divulge it here—it isn't for the world, for I'm a selfish man and I've worked this out for the express benefit of the Maxwell factory, Maxwell dealers and Maxwell owners—present and prospective.

That you may thoroughly understand it and be ready to co-operate with me when the right time comes, I am disclosing this plan gradually in our little weekly magazine, the "Co-operator." This journal tells a lot about Maxwell cars as well as my plan for building up a sales force which will eclipse anything of the kind now known either in this or any other manufacturing business. Every line in it will be interesting to you if you are one of those who mean to stay in the industry and profit by the experience of the past.

I want to enlist and then to retain in the Maxwell-Briscoe sales organization all the best, the most energetic, the most enterprising, and the men of highest integrity in the retail department of the automobile business.

I want to perfect a sales organization that will equal our present unrivaled manufacturing facilities.

I've formulated a plan that opens to each of you an opportunity for success that will be limited only by your own ability, energy and enthusiasm.

If you're interested—if you have suffered from the crude, unfair and ruinous methods of the past, write—I will send the "Co-operator" to you for the asking. Write me personally.

Benj Briscae

President

MAXWELL-BRISCOE MOTOR CO.

P. O. Box 106, Tarrytown, N. Y.

Members A. M. C. M. A.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

A TEST OF PRINCIPLE AND QUALITY

Probably one of the hardest tests an Automobile has ever been put to, has been met by the American entry, A THOMAS FLYER, in the New York to Paris Contest. The front wheels of this car are fitted with Timken Roller Bearings, the hardest service on a car for bearings—but up to the present time has given no trouble or needed any attention.

E. R. THOMAS MOTOR CO., Buffalo:

E. R. THOMAS MOTOR CO., Buffalo:

Gentlemen—It gives me great pleasure to inform you that the TIMKEN ROLLER BEAR-INGS which were used on the Thomas Flyer, which is America's entry in the International Race from New York to Paris, gave no trouble whatsoever from New York to Cheyenne, where I had charge of the car. I also believe that they have given no trouble since. These bearings, as you know, are placed where the greatest strain is on them, and it is a considerable pleasure to inform you that I believe the high quality of workmanship and material in your bearings is such, that they must be able to stand up under any and all road conditions, as the strain placed upon them, and in fact the entire mechanism of the Thomas car in this race was most extraordinary, and probably the hardest strain that could be put upon any motor vehicle, either under ordinary or extraordinary circumstances. The highest praise that I can give your bearings is, that I believe that they are fit component parts for the Thomas Flyer.

Yours very truly,

MONTAGUE ROBERTS.



are made to use on all roads, rough or smooth, and represent a special knowledge of load and tractive requirements, with a wearing quality impossible with any other form of frictionless bearings. And that is why over 60 per cent. of all the high grade American Automobiles and 95 per cent. of the Trucks made in this country recognize The Timken Principle Correct and The Timken Quality Supreme.

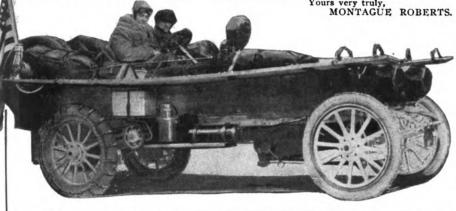
If you are building Automobiles or Trucks we would like to furnish you some data, based on facts that will not only interest you, but save you money.

The Timken Roller Bearing Axle Co.

CANTON, OHIO

10 EAST 31st STREET **NEW YORK**

BRANCHES **429 WABASH AVENUE** CHICAGO



Down in Nashville

MORGAN & WRIGHT TIRES

give the same kind of service users are getting everywhere else.

Mr. Joe E. Yowell wrote us under date of April 8th:

"One of the best sets of tires I ever had were Morgan & Wright, and were on a Buick runabout. I used the car for eight months and at the time I sold it two of the tires still had Michigan air in them, and at last account, which was only a short time ago, one of them had never been punctured since leaving the factory July, 1906."

Nearly two years of service without even a puncture is probably due to good luck as well as to good tires, but the character of service received by other users of these tires leads us to believe that "good luck" must be particularly partial to the Morgan & Wright product.

We repeat what we have often stated before, that while we do not claim that every one of our tires will go thru an entire tour or an entire season without trouble, it would surprise most motorists to know what a large percentage of them will do it.

> There is no method of making friends equal to the method of making good.

MORGAN & WRIGHT, DETROIT

Branches, Agencies or Dealers Everywhere



To experience in the fullest measure the real comfort of AN EASY RIDING CAR you should arrange with our nearest branch for a demonstration.



Automobile Co.

Main Factory, South Bend, Indiana, General Office, Cleveland, Ohio

BRANCHES

New York City—Studebaker Bros. Co. of New York, Broadway and 48th Sts. Chicago, Ill.—Studebaker Bros. Mfg. Co., 578-389 Wabash Avenue.

PHILADELPHIA, PA.—Studebaker Bros. Co. of New York, 830 North Broad Street, (Sub-Branch)

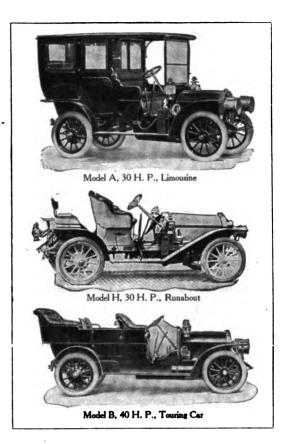
BOSTON, MASS.—Studebaker Bros. Co. of New York, 1930 Boylston St. (Sub-Branch) CLEVELAND, O.—Studebaker Automobile Co., 2004 Euclid Avenue.

Dallas, Texas—Studebaker Bros. Mfg. Co., 817-819 Elm Street. DENVER, Colo.—Studebaker Automobile Co., 1536 Broadway.

Kansas City, Mo.—Studebaker Bros. Mfg., Co., 18th and Hickory Streets.

PORTLAND, ORR.—Studebaker Bros. Co. Northwest, 350-356 E. Morrison St. Salt Lake City, Utah—Studebaker Bros. Co. of Utah, 157 State Street.

San Francisco, Cal.—Studebaker Bros. Co. of California, Mission and Fremont Sts.
Srattle, Wash.—Studebaker Bros. Co. Northwest, 308 First Avenue, South, (Sub-Branch)



Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.

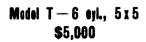


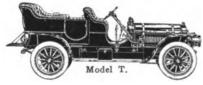
Medel K – 4 cyl., 4% x 5 \$3,500

Model N — 4 eyl., 5 x 5 \$3.700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x4¾ \$4,200





Write for particulars and our Booklet "What Owners Say
About Their Nationals."

National Motor Vehicle Co.

1007 E. 22d Street INDIANAPOLIS, IND.

The Auto-Meter——Is Believed

Every big motor event that has taken place in the past three or four years has seen more Auto-Meters in evidence than all other makes of speed indicators combined.

In the Glidden Tours the number of Auto-Meters used by contestants doubled and tripled all other makes put to-gether.

In the New York-Paris Race the only speed indicator is a Warner on the Thomas car.

Nearly all the automobile manufacturers of the country

use the Warner to test out their cars before they leave the factory.

Two of the most successful makers are including the Warner as part of their regular equipment.

Aren't these facts rather significant—don't they mean anything to you?

Send for our new book, "The Final Truth About Speed Indicators."

Warner Instrument Co.

175 Wheeler Ave., Beloit, Wis





Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any \$4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., \$1900

Write today for special circular aescribing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

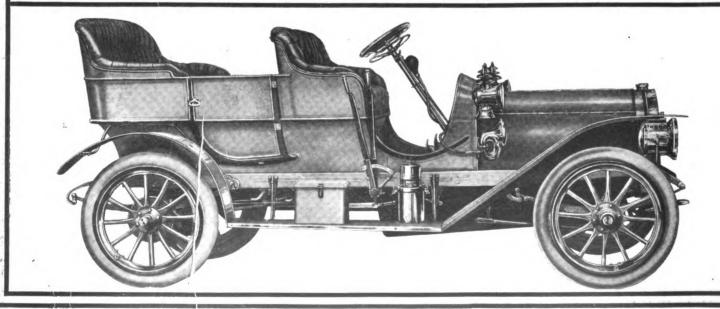
Chicago

Milwaukee

Roston

BRANCHES AND DISTRIBUTING AGENTS Philadelphia

San Francisco



Volume XVIII.

New York, U. S. A., Thursday, May 7, 1908.

No. 6

KELLOM SUES THE SUBSTITUTORS

Philadelphia Oil Producer Follows up His Detective Work—Seeks \$35,000 Damages from Eight Garages.

Charles F. Kellom & Co., the manufacturers of Invader oil, have made good their threat to bring to book the eight Philadelphia concerns from whom Kellom himself purchased oil which he alleges was fraudulently represented to be of the Invader brand.

Alleging fraud in the substitution of an inferior grade of oil, Kellom & Co. have filed eight separate suits asking for damages aggregating \$35,000. The defendants named are the Mercury Machine Co., 2117 North Broad street; Belmont Auto Station, Belmont avenue and Viola street; Western Garage, 230 South Fortieth street; Springfield Garage, Forty-fifth street and Springfield avenue; North Philadelphia Auto Station, 3425 North Broad street; Rittenhouse Garage, 220 South Twenty-third street; Alexander Allan, Hyland avenue, below Belmont avenue; Suburban Garage, 29 West Harvey street.

Injunction proceedings are directed against the latter concern, and the court is asked to restrain it from selling substituted oil under the Kellom firm's trade name. It is alleged that a big tank, labeled with the name "Invader," is filled with imitation oil, sold as the genuine Kellom product.

Statements of claim in the damage suits are identical, and the names of persons who purchased spurious oils as the Kellom oil are given, backed by chemical analyses to prove the character of the lubricant.

At the time of his "round-up," the Motor World reported how Kellom, accompanied by witnesses, had visited thirteen Philadelphia garages, at eight of which he called for and was supplied with what was represented to be Invader oil, but which proved to be a spurious article. At one place, the

Kellom party struck up such a "cordial acquaintance" with the salesman that he showed them the receptacle from which he laughingly stated that any brand of oil that might be called for was drawn.

Brandt to Conduct Cadillac Branch.

Ernest H. Brandt, former sales manager of the Corbin Motor Vehicle Corporation, has been appointed general eastern manager of the Cadillac Motor Car Co., an appointment that foreshadows the establishment of a direct Cadillac branch in New York City. It shortly will be located at about Fifty-ninth street and Broadway and it will be, of course, Brandt's headquarters. He will have dominion over New England, New York and New Jersey, and the cities of Philadelphia, Baltimore and Washington. In earlier years, Brandt was connected with the Hartford Rubber Works Co., with which E. R. Benson, who just has assumed the sales management of the Cadillac company, also was long identified.

Metzger Quits Cadillac; Benson Succeeds.

W. E. Metzger, so well and so widely known as sales manager of the Cadillac Motor Car Co., Detroit, resigned that office on the 30th ult, and has been succeeded by Ernest R. Benson, who in December last relinquished the secretaryship of the Hartford Rubber Works Co. to join the Cadillac company. Since that time a number of changes have been made in the sales system and these will be further amplified and perfected by Benson. Just what are Metzger's plans for the future have not been made known. He has several proposals under consideration and that he soon will be heard from, his ability and long experience and vigorous personality renders certain.

What Rubay's Schedule Discloses.

Schedules in bankruptcy of Leon Rubay, Inc., the New York accessory importer who failed some two months ago, show liabilities of \$25,186. The assets, amounting to \$19.562, consist of cash, \$586, stock and fixtures, \$5,945, and accounts \$13,031.

FORD FILES AN AUDACIOUS ACTION

Makes Use of Ugly Rumor Affecting A. L. A. M. in Defending Infringement Suit

—Basis of the Rumor.

Ever since it became generally known that pressure from within the Association of Licensed Automobile Manufacturers was seeking to bring about a reduction in the amount of royalty paid under the Selden patent, rumors have been afloat that the organization was in danger of disruption. The rumors have gathered embroidery as they traveled and although probability of disruption is so exceedingly remote as to be almost unthinkable, it did not prevent the attorneys for the Ford Motor Co. from putting the tale to work.

With that audacity which has marked their actions since the Electric Vehicle Co. brought suit against the Ford company for alleged infringement of the Selden patent, the attorneys on Tuesday last filed an application in the United States Circuit Court for the Southern District of New York, asking that the Electric Vehicle Co. be required to give security for costs in its suits for Selden patent infringement against the Ford company and others, failing which, they pray that the suits be dismissed. It is cited that the Electric Vehicle Co. is the sole owner of the Selden patent, that that company is in the hands of receivers and that the control of the litigation is under the authority of the A. L. A. M., which heretofore has been paying the expenses thereof and is under obligation to pay such expenses. The rumor affecting the future of the association and which alleges that it is in a "bad way" generally, is made use of in the concluding clause of the application, as follows:

"That said licensed association appears to be on the verge of dissolution and its individual members likely to be involved in costly litigation; that its revenues are very much impaired, and that as a source from which costs may be paid, it has become wholly unreliable."

While this manner of getting a disquieting rumor before the public has caused a conflict of opinion ranging from expressed admiration to unmeasured condemnation, it is safe to say that few persons accept the Ford application seriously or believe that the courts will give it more than compulsory attention.

As a matter of fact, the two members of the A. L. A. M. who led the fight for reduced royalty have within the last week voiced the most loyal sentiments, one of them giving it as his opinion that even without the Selden patent as a rallying standard, the disruption of the association would be in the nature of a calamity to the industry, so useful has it proved. The other, H. H. Franklin, has not only voiced practically similar opinions, but has given proof of his loyalty by cancelling his contract with an Ohio agent who violated the A. L. A. M. "exclusive agency" agreement by handling an unlicensed car. Also as a matter of fact, the membership agreement of the association is of a very binding nature as the Ford attorneys discovered when they took up or stood behind the Searchmont case in an endeavor to secure a share of the A. L. A. M. surplus.

Selden Royalty Case is Continued.

The hearing on the application of receivers of the Electric Vehicle Co. for permission to reduce the amount of royalty now exacted from holders of licenses under the Selden patent, has been continued until May 18th. Counsel for all of the interests concerned were present in the United States Court in Trenton, N. J., on Monday last, the date originally set for the hearing, and the argument presented was such that the court would not render an immediate decision.

The only objector to the granting of the petition was Frank A. Harrigan, of Philadelphia, who represented one of the creditors of the Electric Vehicle Co., arguing that these royalties had all been collected in the past, and gave statistics to show that in no year since 1903 had their aggregate fallen as low as the newly stipulated maximum. In 1903, they amounted to \$153,783.55; in 1904, \$253,273.42; in 1905, \$413,958.31; in 1906, \$564,535.24, and in the first nine months of 1907, \$508,058.31. He pointed out that the granting of the petitions would, therefore, result in loss to the creditors of the Electric Vehicle Co., and asked that it be dismissed. In this he was opposed not only by the receivers' attorneys, but by the former United States Attorney-General John W. Griggs, who appeared in behalf of the Association of Licensed Automobile Manufacturers.

After a lengthy hearing of argument, Judge Lanning decided that the interests were of such magnitude that further consideration was necessary, and postponed further action until May 18.

THE MOTOR WORLD

The Week's Incorporations.

Kewaunee, Wis.—Marvel Motor Works, under Wisconsin laws, with \$30,000 capital. Corporators—John Dishmaker and others.

Kansas City, Mo.—Fletcher-Cowherd Automobile Co., of Kansas City, The, under Missouri laws; capital increased from \$10,000 to \$16,000.

Seattle, Wash.—White Motor Car Co., under Washington laws, with \$50,000 capital. Corporators—C. B. White, John Clifford, P. S. Donaldson.

Chicago, Ill.—Maxwell-Briscoè Co., under Illinois laws, with \$30,000 capital, to sell automobiles. Corporators—Joseph M. Austin, Clarence E. Adams, S. C. Austin.

Ashland, Ky.—Ashland Automobile Co., Boyd County, under Kentucky laws, with \$3,000 capital. Corporators—Henry J. Seibert, Charles W. Hutchinson, Bessie Hutchinson.

Omaha, Neb.—Pacific Coast Mobile Car Sign Co., under Nebraska laws, with \$100,-000 capital. Corporators—L. B. Kinne, Dr. N. J. Rice, Theodore Kharas, J. C. Baker, C. G. Saunders.

Chicago, Ill.—Hansen-Busch Automobile Co., under Illinois laws, with \$5,000 capital; manufacturing and dealing in automobiles and operating machine shop. Corporators—John T. Gilbert, A. Hansen, H. Busch.

Glens Falls, N. Y.—Glens Falls Automobile Co., under New York laws, with \$20,000 capital; to manufacture and sell automobiles. Corporators—W. Irving Griffing, Edward F. Irish, Winifred S. Harris, Glens Falls, N. Y.

Hartford, Conn.—Bush Mfg. Co., The, under Connecticut laws, with \$2,500 capital; to manufacture, buy, sell and deal in automobiles and automobile parts. Corporators—Philip M. Bush, Edward J. Jetter, Bernard Garner.

Lynbrook, L. I.—Walton Motor Co., under New York laws, with \$10,000 capital. Corporators—Julian N. Walton. Lynbrook, L. I.; Elbridge N. Smith, 412 Clermont avenue, Brooklyn, N. Y.; George F. Hickey, 69 Wall street. New York City, N. Y.

Grand Rapids, Mich.—Anthony-Hatcher Co., The, under Michigan laws, with \$20,000 capital; to manufacture automobiles, trucks, and parts, general michinery and tools. Corporators—George E. Anthony, William A. Hatcher, George Clapperton, Charles M. Owen.

New York City, N. Y.—Haynes Automobile Co., under New York laws, with \$5,000 capital. Corporators—Ernest W. Headington, 325 West Forty-fifth street, and Walter Broadhead, 3440 Broadway, New York City, N. Y.; James R. Finucane, 148 Washington avenue, Brooklyn, N. Y.

In the Retail World.

S. S. Pierce, a young business man from Boston, has succeeded the Western Automobile and Supply Co. at Colorado Springs, Colo. Studebaker cars are to be handled in Colorado Springs, Colo., by Sanderson & Reinken, who have secured the agency. They will handle both gasolene and electric vehicles.

The Johnson Carriage Co. are this week opening a two-story fireproof garage in New Canaan, Conn. They will handle the Maxwell cars and do a general repair and garage business.

Bruce & Co., Memphis, Tenn., have obtained a permit to erect a garage at 340 Monroe avenue. The building, to cost \$10,-900, will be a one-story brick structure, 86 feet wide and extending back 144 feet.

Albert L. Perkins, dealing in automobiles at 1437 North Second street, St. Louis, Mo., has applied to the United States District Court to be adjudged a bankrupt. His liabilities are \$29,725.73, and his assets \$14,057

Frederick 'Phillips, a civil engineer of Utica, N. Y., who is superintending a big engineering job in Florida, has gone into the automobile business "on the side." He has taken the Franklin agency and plans to erect a garage in Jacksonville.

The Bland-Mueller Auto Co., Milwaukee, Wis., has taken possession of the quarters formerly occupied by the Solliday Motor Car Co., at Fourth and Prairie streets. They will do renting, tire repairing and general garage work.

Fire at Golden Gate avenue and Larkin street, San Francisco, Cal., on the 25th ult., burned out the establishments of the Prest-O-Lite Co., the Neustadt Auto Supply Co., the C. F. Splitdorf Co., the San Francisco Auto Repair Co., and D. Zelinsky, automobile painter.

The Star Motor Co., 226 Halsey street, Newark, N. J., has been adjudged insolvent and Vice-Chancellor Emery has appointed W. Eugene Turton, a local lawyer, as receiver, fixing his bond at \$5,000. The assets of the company were given as \$3.300, and the liabilities as aggregating \$14,000.

The property of the Brockton Motor Exchange, Brockton, Mass., has been bought by a new concern named the Gay Automobile Co., incorporated with a capitalization of \$10,000. The company will continue the general automobile business at the same location, 351 Belmont avenue.

Aitken to Design the Mors Wagons.

The St. Louis Car Co., makers of the American Mors, are making ready to bring out commercial vehicles. W. J. Aitken, who has had experience as designing engineer with several automobile concerns, has been engaged to further the work.

Prest-O-Lite Sues Post & Lester.

A bill of complaint has been filed in the United States Circuit Court for the Connecticut district, by the Prest-O-Lite Co. of Indianapolis against the Post & Lester Co. of Hartford. The complainant alleges infringement of trade mark.



MARCH EXPORTS SHRINK SLIGHTLY

Gains in Some Geographical Divisions Offset in Others—Shipments of Parts Show Marked Gains.

March proved to be a month of ups and downs in the export field. Yet despite gains on the part of 9 of the geographical divisions into which the foreign market is segregated by the Bureau of Statistics at Washington, the losses of the remaining 5 were sufficient to cause a net loss to the industry of some \$6,000, as compared with the results of the March trading in 1907. But 217 cars were exported during the month, as against 307 one year ago. Their combined values were \$466,447 and \$493,425, respectively. The valuation of parts exported, however, revealed a gain of something over \$21,000.

Of the countries showing improved conditions, West Indies and Bermuda led with \$20,226, while Italy, France and "Other Countries" followed in the order named with \$18,800, \$15,300 and \$13,000, respectively and in round numbers. Depreciating returns are credited to "Other Europe," which has fallen away nearly \$55,000, Mexico, with about \$27,500 loss, South America, British East Indies and Germany.

For the nine months ending March 31st a total gain of \$182,618 is revealed. Eight countries shared in the upward trend, the United Kingdom leading with no less than a \$373,780 appreciation. France, West Indies and Bermuda, Italy and "Other Countries" followed in this order and in amounts ranging from \$116,260 in the first instance, to \$24,860 in the last. Of the five countries showing losses as compared with the corresponding period of one year ago, Mexico lead with some \$301,100, while "Other Europe," British North America and British Australasia followed with approximately \$63,000, \$46,000 and \$43,000 losses. The losses of the British East Indies and Africa were small. The report in detail follows:

	←Ma	rch—	Nine Months Ending March			
	1907	1908	1906	1907	1908	
Automobiles and parts of			\$2,064,874			
*Automobiles	\$403.425	\$466,447		\$2,965,284	\$3,159,147	
Parts of		72.941		453,309	442,064	
Exported to—	31,722	72,741	•••••	430,009	442,004	
United Kingdom	146,621	156.820	541,431	809,644	1,183,425	
France	65.813	81.083	139,226	277,418	393,678	
Germany	13,701	10.347	45.742	85,508	91,245	
Italy	27,024	45.842	171.628	126,127	153.076	
	59.573	4.688	102,459	166,260	103,141	
Other Europe	404'-04	135.948	353.717	695,884	649.641	
British North America						
Mexico	66,908	39,430	201,121	628,243	327,091	
West Indies and Bermuda	13,391	33,617	220,424	171,800	230,294	
South America	21,415	4,293	52,032	159,056	177,892	
British East Indies	4,758	391	28,733	26,083	20,989	
British Australasia	1,265	2,172	129,620	185,943	142,964	
Other Asia and Oceania	236	11.151	40.767	69.712	87.506	
Africa	118	525	26,094	8.673	7.161	
Other countries		13.081	11,880	8,242	33,108	
Other countries		10,001	-1,000			
Total automobiles and parts of.	\$545,347	\$539,388	\$2,064,874	\$3,418,593	\$3,601,211	

^{*} Number not stated prior to July 1, 1906.

Dickinson's Verdict Proves Valueless.

Despite the jury verdict which gave him the full amount he sued for, \$16,000, and \$3,000 interest, Fred S. Dickinson appears to be as far as ever from securing the money from the Matheson Motor Car Co., Wilkes Barre, Pa. Dickinson claimed that he was instrumental in selling to the Matheson company the inventions of Charles R. Greuter for which he was promised certain returns, and after a long trial the jury sustained his claim. Judge Archbald, sitting in the United States Court at Scranton, Pa., has, however, overruled the verdict, and Dickinson probably will ask for a new trial.

During the hearing it was claimed by the plaintiff that the defendant company was estopped from denying its responsibility of the agreement entered into by the plaintiff and Greuter. Judge Archbald, in his opinion, fails to coincide with this view, and says, in part: "All that the plaintiff can claim to have contributed is his service, which was not rendered to the company, but solely for himself and Greuter. Greuter as sole owner of the invention was at perfect liberty to dispose of it to any company he desired and the company owed no duty to Dickinson except as a matter of courtesy. Judgment is rendered for the defendant non obstante veredicto."

Imports Continue to Diminish.

Despite the heavy receipt of taximeter cabs, which has served to give the importing trade an appearance of health, the statistics indicate that there has been no interruption in the shrinkage of the American demand for foreign cars. During April. but 71 automobiles, of the total appraised value of \$181,496.75, were brought over, in comparison with 108 cars, valued at \$348,835.09 in April, 1907, and 152 cars, valued at \$508.083.57 in April, 1906. Three hundred and thirty-four cars, valued at \$763,393.78, have been imported at this port since January 1, compared with 384 cars, valued at \$1,261,296.59, and 452 cars, valued at \$1,467,862.15, in the same period of 1907 and 1906, respectively.

BANKER ALLEGES A CONSPIRACY

Former Chicago Dealer Sues to Recover
Damages for Lost Business—Tells
How He was "Sold Out."

Having stepped into the limelight again after a long period of retirement from public view, Albert C. Banker, of Chicago, manifests a disposition to hold the stage. He jumped to the center a few weeks ago, as narrated in the Motor World at the time, through the action of a Chicago court resulting from his alleged threat to shoot Nicholas E. Ford, who had foreclosed a mortgage on his automobile business. It developed in the proceedings that his "shooting iron" was very much out of commission and could not be fired.

Now Banker is getting back at Ford; and others are involved. Banker, on Saturday, 2d inst., filed a suit in the Municipal Court, with a bill of particulars, wherein charges of conspiracy to defraud him of his automobile business are made against his former attorney, J. Marion Miller, together with George A. Durant, Banker's former superintendent; Nicholas E. Ford, who is a broker, and William H. Gardner. The suit is for damages in the amount of \$15,000.

Banker formerly had an automobile establishment on Michigan avenue and in December, 1907, he says, Gardner's attorney, Miller, induced him to execute to Miller a promisory note for \$1,000 and a mortgage on the plant. These obligations, according to Banker, were to secure to Miller the payment of future attorney's fees. Later, according to Banker, Durant was made custodian of the note and the mortgage, and Ford, representing that he was assignee. owner and holder of the note and the mortgage, seized the property and on April 6, Banker charges a "pretended sale was made without legal notice thereof, and the only bidders were George A. Durant and William H. Gardner.'

Metzger Succeeds Gunderson in N. A. A. M.

At the monthly meeting of the National Association of Automobile Manufacturers in New York yesterday, W. E. Metzger resigned as the representative of the Cadillac Motor Car Co., and V. M. Gunderson as representative of the Northern Motor Car Co. Gunderson was immediately succeeded by Metzger, who long has had an interest in the Northern company, with which, it has been common report, he shortly will become prominently identified, a report that appears well founded in view of yesterday's proceedings. At the same meeting E. R. Chapin resigned as representative of the E. R. Thomas Buffalo company and H. E. Coffin as representative of the E. R. Thomas Detroit company, Chapin being at once elected to fill the vacancy caused by Coffin's retirement.



Automobiles

A "six" needn't be expensive to own.

You can carry seven passengers in the Franklin 6-cylinder Type H automobile cheaper than you can carry five in the average 5-passenger machine.

Type H weighs only 2,600 pounds. And the air-cooled engine does the same work on 25 per cent. less gasoline than a water-cooled motor.

The average 7-passenger machine weighs a thousand pounds more than Type II. That means over 40 per cent more gasoline and tires to pay for. And not an ounce more touring ability.

You can't use the power of a heavy automobile on average roads. You can't "let it out" comfortably and safely.

What big, heavy water-cooled machine could run from San Francisco to New York in 15 days, as the Type H did two years ago; or from Chicago to New York in less than 40 hours as the Franklin D did last summer with the same size cylinders as Type H and the same shock-resisting Franklin construction? Many automobiles have tried it. None but the Franklin ever did it.

Type H doesn't pound on the roads like a heavy automobile. It is strong and easy to manage—less liable to accident. It lasts longer. That brings the owning cost down.

The Franklin has no water-cooling system; nothing to boil nor leak nor freeze nor fuss over. Type II solves the problem of high-power, light-weight, and a well-balanced motor. It is the present limit of 6-cylinder engineering. No other high-powered automobile rides so easy or is so smooth and flexible. No other carries its load so far in a day on American roads. Think of a big 6-cylinder 7-passenger automobile that costs less to own and run than the average 5-passenger 4-cylinder machine.

Weight makes owning-cost. See your automobile weighed.

16 h. p. 1	Runabout	\$1,750	28	h.	p. Touring car or Runabout \$	2,850
16 h. p. '	Touring car	1,850	42	h.	p. 6-cylinder Touring car or runabout.	4,000
	-	Prices F.	O.	B.	. Syracuse.	

Write for the catalogue describing Franklin models.

H. H., FRANKLIN MFG. CO., Syracuse, N. Y.





Published Every Thursday by

The Motor World Publishing Company

Ioseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . . 10 Cents Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

AT Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MAY 7, 1908

Positions of the Pedals.

Motorists of long standing often find it difficult to appreciate the mental attitude of the novice, and even to comprehend how it is possible for confusion to result from an attempt to control successfully so simple a mechanism as the motor car. Even when not at all well acquainted with the details of the power plant, it is still hard to realize that the control mechanism presents untold perplexities to the beginner. This lack of sympathy between those who possess and those who are without experience in handling machines, tends to act as a check upon simplification in certain details, merely because the makers find it hard to appreciate the need of refinements which are, to their own way of thinking, uncalled for.

It has come to be pretty generally recognized, for example, that the accelerator pedal is a useful accessory to the controlling

system. In modern cars, it is most commonly use in conjunction with a hand lever mounted on the steering wheel, and furnishes a convenient method of suddenly increasing or reducing the speed of the engine, when changing gears, or when cramped in traffic. It would be extremely difficult to convince the average maker of a car so equipped, however, that there is the remotest possibility that the accelerator pedal and the brake pedal which lies adjacent to it might become confused in an emergency, and with disastrous results. With the driver of experience such a mistake is practically impossible because the use of the respective pedals, as well as their exact location on the foot board is so firmly impressed on the mind that the effort of applying them is wholly sub-conscious. As the uses of the two are distinctly opposite in purpose, the chance of their becoming confused is still further removed.

Nevertheless, the fact remains that beginners are frequently known to perform most extraordinary evolutions through this circumstance, and that numerous accidents are avoided only because a kindly Fate which always watches over the toddler intervenes to prevent. On this account such arrangements of the control as permit the accelerator to be placed at some distance from the brake pedal, or require a different movement for operating the one from that which is required for the other, may be considered advantageous. Where pedals of the "push" type are used for the clutch and brake, and of the piano type for the accelerator, the advantage is considerable, as is also the case where the accelerator pedal or button is located at the extreme end of the board.

What would serve the purpose to better advantage, perhaps, would be some automatic interlocking arrangement, whereby the functions of brake and accelerator pedal could be combined, with opposite motions required to effect the two different purposes. Somewhat the same idea is carried out where the clutch pedal is interconnected with the throttle. This arrangement has its disadvantages, however, since with anything like a close adjustment, it is impossible to speed the motor before engaging the transmission. With the brake, no such difficulty exists. The possible objection on the score of the occasional requirement of starting from rest without fully releasing the brake is now eliminated by the fairly general adoption of the ratchet

sprag, or "hill-pawit" "Fool-proofing" the car. is an odious catch phrase which has itself a foolish sound in the ears of the accomplished motorist. But, when it is considered that not every driver can be expected to be an expert or a mechanic, the wisdom of the practice is perfectly apparent. 1

Repairers, Expert and Otherwise.

He is a wise automobilist who knows his own repairman. Probably there is no riskier experiment, or one more replete with possibilities for annoyance, than to seek the counsel and assistance of a mechanic or half mechanic, whose only guarantee of ability to repair the power plant of an automobile is found in his own statement, printed on his business cards or heralded by his companions, that he is a "Gas Engine Expert."

Dr. Johnson says: "Knowledge is of two kinds: we know a subject ourselves, or we know where we can find information upon it," and the latter is as important as the former. To accept the statement of a selfstyled expert that he is entirely competent to remedy the difficulties which have presented themselves, without evidence that his experiences in the past warrant the assertion, is merely an instance of "buying a pig in a poke" and as most of the employes in garages and repair shops proclaim their right to the title "expert," it is more than an even chance that the customer will suffer as often as he will benefit by the experiment.

One of the common practices of the present day is for owners to engage the services of shop employes and garage attendants to do work evenings and Sundays, when they are not engaged in their regular occupations. Of course the object is to get "cheap" repairs by cutting out the garage owner's profit. But this plan does not always work well, as it does not follow that the employes who can temper springs or turn up a set of piston rings, is competent to find the trouble in a motor and remedy it. There is no reason why a machinist should be expected to understand the timing of a motor or the adjustment of some of its minor parts, and actually he does not understand it, unless he has had the opportunity to do these things often, thus learning by actual experience, which, positively, is the only way that he can learn.

Because a man is familiar with the uses of machinery and can run a lathe or drill

press he is not necessarily competent to advise in matters relating to automobiles. An owner will do far better to pay the cost of having his car repaired in a proper place and in the regular way then he will by engaging the "off" time of some irresponsible machinist who may be able to "bluff" through a job of repair or adjustment, which he actually does not understand.

It seems as though every time Tom, Dick and Harry who works in a garage or repair shop, whether as body washer or clerk, soon styles himself as some sort of a mysterious wizard who can diagnose the symptoms in gasolene engine troubles and make complete repairs with one hand tied behind him and both eyes shut. But let this type of individual get at your engine and you'll bring joy to the reputable repairman to whom eventually you will be forced to go.

If there is any one thing more than half a dozen others that owners want to flee from, as they would from the plague, its the "gas engine expert" or any other self styled "expert" who, in point of fact, too often does not know as much about the automobile as does the man who paid for it and has had, at least, a little experience in its care and operation.

Mr. Hower and His Run.

Chairman Hower's press bureau is making a manful effort to prove itself worthy of its hire. It has delivered a "crusher," which is to say, that it has answered the Motor World's query: What will happen to the Glidden contest if anything happens to Hower? The press bureau answers the question easily—poof! just like that! "The tour will go right on." And of course it will. But not "according to Hower." That is impossible, and there is no other way that it rightfully can go on if the rules mean what they say.

The rules state unequivocally that no one but Mr. Hower shall have anything whatsoever to say or do with the contest at any time. The press bureau maintains that if that gentleman should be disabled by a stomach ache or anything else, his secretary will fall heir to his duties and to his previously unheard of power—the power to reject anyone or anything, or to change or repeal any rule, or to make new ones, or to alter any score and keep on doing it "up to and including the final award."

The press bureau is inclined to scold any one who disagrees with its telepathic interpretation of the English language. It thinks it is "real mean" that any one should resort to "quibbles" or "technicalities." But when a small army of tradespeople are engaged in a bitter scramble for a sky-scraping advertisment—which is the real definition of the Glidden contest—technicalities are likely to play a very important part; and he is a wise promoter who recognizes the truth far in advance.

According to the rules as they have been laid down, no contestant in the Glidden business need, or indeed should pay the slightest attention to anything that may be said by assistant chairmen, or first, second or third assistant secretaries, or even press agents. They can laugh at each and all of them. There is but one person to whom they should and must give heed-the chairman, Mr. Frank B. Hower, an estimable gentleman with unusual ideas of sport. There is no room for quibble on this point. The rules are specific. They provide for one official and one only-the chairman; no one else has any authority of any kind and no provision is made for a shifting of any part of his power or for a substitute or successor in the event of his disablement. His secretary may have a "rainy day schedule" and other things concealed in his brain, but what of it? If Mr. Hower is not there to drag them from concealment and make a new rule or change an old one on the spot the secretary certainly has no power to do so, and the competitor who heeded him merely would be "taking chances."

The fact of the matter is that Mr. Hower either is consumed by his own egotism or has been badly advised. The manufacturer who pays \$200 for the privilege of seeking an advertisement in such a "blind run," the rules for which mean nothing, and which absolutely is subject to the irritations and caprices of one man, must want advertisement pretty badly. Mr. Hower undoubtedly is a gentleman and an honorable one, but for all of that, he is but human. Rules and laws are made to be inflexible for a purpose. No judge can be fair to all who is a law unto himself, and who may have one rule to-day and another one to-morrow. That is the sort of judgment on which the Glidden contest places a premium, paid press agents to the contrary notwithstand-

When a manufacturer has acquired a proud reputation for his product no effort or expense is too great to protect it. For that reason, the oil manufacturer who has brought to book men who palmed off on

COMING EVENTS

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climbs on Perry and Phillips hills.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 23, Albany, N. Y.—Albany Automobile Club's annual hill climbing contest up Menand's hill.

May 30, Salem, N. J.—Salem Horse Show and Athletic Association's track meet.

Map 30, Denver, Colo.—300-miles road race for stock chassis.

May 30, Boston, Mass. Bay State Automobile Association's race meet at Readville track,

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1.200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

unsuspecting purchasers a spurious lubricant, merits whole hearted commendation; his example is worthy of emulation. The just-as-good argument is bad enough, but it is not in the same class with barefaced substitution.

Digitized by Google

SMALL TROUBLES SPOILED SCORES

Only Two Perfect in Harrisburg's Sealed Bonnet Run-Ditching of One Car the Only Disaster.

Every one agrees that it was a great sealed bonnet endurance run-was the two days' contest promoted by the Automobile Club of Harrisburg, Pa., the route of which was from that city to Philadelphia and rethe class. The Rambler and the Pennsylvania also were perfect in this class until the technical committee got in its work. Then the Rambler lost 17 points and the Pennsylvania was assessed 11 points, both penalizations being for loosened parts, it was stated. The only other car that suffered in this manner in the final reckoning was the Thomas in Class A, driven by C. C. Fairman. It was assessed 15 points.

Why many of the cars did not finish with perfect scores may be told in a few words.



HODSON (STODDARD-DAYTON) DITCHED NEAR EASTON

turn, Monday and Tuesday, May 5th and 6th. Unlike a majority of runs of the sort there were not a dozen or more perfect scores at the finish. True, of the 26 cars that left Harrisburg on Monday, there were six that got back to the Pennsylvania capital Tuesday night with apparently perfect scores, but when the technical committee got through its task of examining the mechanism of the perfect six, four were dropped from the list. Whereat there was considerable sorrow. There were just two cars that withstood every test, and were adjudged perfect scorers in every sense of the word. They were Walter C. White's White, winner of Class A, for touring cars costing \$2,250 and over, and C. C. Cumbler's Pullman, winner of Class D, for runabouts costing less than \$2,000. However, the winner in Class B, for touring cars costing less than \$2,250, was two winks within a perfect score. It was W. W. Cram's Mitchell, and after finishing with perfect scores as regards time schedule and without any mechanical trouble, the committee in the final examination discovered a small water leak and a nut lock on the exhaust manifold missing. That cost just two points. In like manner was Stuart Lafean's Pullman penalized in Class C, for runabouts costing \$2,000 and over. It finished with a perfect score, but in the final examination the committee found it six points off technically, not enough, however, to lose first place in

gine trouble. Robert Shirk, Stoddard-Davton ,lost 150 points through carburetter trouble, while the other Stoddard-Dayton, driven by Howard Hodson, was put out at Easton with a broken wheel, being forced into a ditch by another car. F. F. Mears, Atlas, had continuous tire trouble, and A. D. Miller, Elmore, was disqualified after the first day's run. Engine trouble is said to have been responsible for the downfall of C. J. Swain, Apperson, while Arthur Kumpf, who finished last year's Glidden tour with a perfect score, broke the differentials in his car. A. A. Jones, Ford, damaged a coil unit which lost for him many points from both time and mechanical standpoints.

There were 26 cars that left Harrisburg early Monday morning for the 174.5 miles run to Philadelphia, via Lebanon, Reading, Allentown, Easton and Doylestown. The time limit to Lebanon, 26.4 miles, was 1 hour 20 minutes, and to Reading, 29.8 miles. 1 hour 30 minutes. One hour 50 minutes was allowed for the 37 miles run to Allentown and 1 hour 10 minutes to Easton, 23 miles. From Easton to Doylestown is 32.4 miles and the schedule was 1 hour 35 minutes, ten minutes less than this being allowed for the final leg of the first day's run into Philadelphia, 26.1 miles.

The roads over which the route was laid were in far better condition than had been expected after the rains of the week before. The worst trouble was dust, although con-



CROWD OF SPECTATORS AT READING-A TYPICAL GATHERING

R. H. Hagerling, Cadillac, had tire trouble, which lost 203 points, and jammed his gears, which cost him a further loss of 439 points. Chester Smith, Jackson, broke a tire bead and lost 15 points, while E. G. Irvin's Pullman suffered with a broken water connection. Robert Morton's Pullman had engine trouble the first day and Graupner, a running mate of Irvin and Morton, lost points through the same cause.

Conklin's Pullman had both tire and en-

siderable tire trouble was experienced on account of sharp loose stones. The water breaks in the vicinity of Reiglesville and Doylestown also caused several minor mechanical troubles. The only accident of the day was caused indirectly through tire trouble. Howard Hodson, Stoddard-Dayton, was forced into a ditch between Kutztown and Allentown when trying to pass C. C. Fairman's Thomas car. The latter had been delayed by tire trouble and a signal had

been given to Hodson to pass. As he was about to do so, the Thomas veered with the above result. With the aid of passengers in Charles Fleming's Maxwell the car was pulled out of the water and was making fine time on the way to Dolyestown, when the right front wheel, which had been weakened by the dive into the ditch, gave way and dropped the axle down on the ground. No one was thrown out or injured in any way.

It was a dirty-faced crowd that reached Philadelphia and drove to the White garage where the cars were locked under official surveillance during the night. Despite their dirty faces, eleven of the drivers were happy for it was supposed they had perfect scores for that half of the journey. The clean score drivers were: J. S. Tregon, Jackson; E. G. Irvin, Pullman; J. A. Kline, Pullman; Stuart Lafean, Pullman; H. W. Rawll, Pierce Arrow; W. M. Cram, Mitchell; S. Thorley, Cadillac; A. A. Jones, Ford; A. H. Bitner, Rambler; Len Zengle, Pennsylvania, and last, but not least by any means, Walter C. White, White.

The return trip from Philadelphia to Harrisburg, on Tuesday, via Norristown, Reading, Lancaster and Mount Joy, a distance of 142.7 miles, resulted in a tumble from the perfect score brigade by several others. The run back to Harrisburg was marked by one casualty. It was the unfortunate knocking down and injuring of James L. Douglass, a prominent citizen of Reading, by Chester A. Smith, in a Jackson car. The accident was not the fault of the driver, as has been stated, but was caused by the inadequacy of the police regulations, according to an eyewitness of the unfortunate affair. When the cars began to arrive at the control in Reading there was but one policeman to handle a crowd of 250 persons. Smith already had stopped his car near the control and when the time came for him to check in he started ahead and the crowd parted, leaving the

old man standing alone with his back to the approaching car. He did not get out of the way in time and the car hit him and knocked him down. At this point the officious policeman jumped on the running board of the Jackson car, grabbed Smith by the neck and in spite of the fact that the car was still moving, attempted to drag him from the seat. Accompanied by a cry of "lynch him" from the mob. Smith was yanked from the seat and dragged off to the police station, still held by the back of the neck and surrounded by a hooting crowd. The totally uncalled for rough manner in which the policeman handled Smith gave the impression that the brave (?) Reading officer had captured a desperado, which is probably what he wanted the crowd to think.

This left the remaining crowd at the control to wander around with no police in sight. R. H. Hagerling, Cadillac, drove up just as the old man, Douglass, was knocked down, and Hagerling was arrested, too, although he was not concerned in the accident. Although Smith ran only 25 yards, he was charged with running 20 miles an hour, and Hagerling's name was entered in the blotter with the same offense. Each driver was fined \$25, which was paid by W. I. Dill, who entered the Cadillac car. After the fines were paid both drivers were re-arrested-Smith on a charge of violating the speed regulations of the county and with aggravated assault and battery, and Hagerling for having violated the speed regulations. Bail was given as the magistrate would not listen to the argument that the drivers could not be arrested twice for the same offense, after the fine had been paid once. It is doubtful if Douglass will recover. His left arm was broken near the shoulder, and his left hip was injured.. It is feared that he may have suffered internal injuries, and as he is 81 years old, it is feared that his age may count against his recovery. At last reports he was but slightly improved.

Walter White's driving excited admiration. He was always the last to start and always the last to check in on time at the controls, and in consequence his party was the only one not covered with dust. White always had just time enough at the controls to get out and look over the car. His victory was a double one, as he was one of the four drivers that tied for the trophy last year. The others who were in the tie were A. G. Irvin, Pullman; S. K. Hamburger, Thomas, and H. F. Rawll, Pierce Arrow. As Hamburger could not get the same car he had last year he did not compete in the runoff. Why the other did not get perfect scores has been told. White thereby gains permanent possession of the 1907 trophy.

Subjoined is the complete score as given out by the contest committee. The first two colmns of figures give the penalties for the lateness at controls each day; the second two columns show the points scored for work on motors, breaking of seals, or stopping of motors involuntarily. The fifth column gives the penalties imposed by the technical committee in its final investigation after the finish at Harrisburg. Loose bolts, nuts, broken parts and other disarrangements were penalized.

Virginia State Association Joins A. A. A.

The Virginia State Automobile Association was elected to membership in the American Automobile Association at the meeting of the latter organization, held in New York City, Tuesday afternoon, 5th inst. The acquisition of this association makes the total State memberships of the national body number twenty-four. The Automobile Club of Little Rock, Ark., was elected as a club. Frank Joyce, president of the Minnesota State Automobile Association, recommended that the association adopt an emblem for members to use on the radiators of their cars. It is likely that his suggestion will receive further consideration.. It was stated that several attractive touring propositions were submitted, but the nature of them was not divulged. The nomination of Powell Evans, president of the Automobile Club of Philadelphia, as a member of the executive committee of the Good Roads Board was confirmed.

No More New York Legislation This Year.

Despite printed statements that during the special session of the New York legislature, which will convene on the 11th inst. action will be taken on the new automobile bill that was abandoned by Senator Armstrong, in the last house of the regular session, there is no truth in the reports. Chairman Terry, of the legislative committee of the American Automobile Association states that as the special session was called solely to consider the race track bills, automobile legislation is out of the question.

CLASS A.—TOURING CARS COSTING \$2,250 AND OVER.

	Time.		Me	ech'l.	
	lst	2d	1st	2d	То-
	Day.	Day.	Day.	Day.	Exam. tal.
Walter C. White, White	0	0	0	0	0— 0
C. C. Fairman, Thomas	0	0	0	0	15 15
Robert Morton, Pullman	6	0	55	4	0— 65
J. A. Kline, Pullman		11	Q	50	60—121
Robert Shirk, Stoddard-Dayton	0	39	0	150	0—189
CLASS B.—TOURING CARS COST	ING	LESS	THAN	\$2,250.	
W. M. Cram. Mitchell	_	0	0	0	2— 2
Charles Fleming, Maxwell		U)	0	2	4— 6
Andrew Bender, Maxwell		2	0	2	19— 25
Max Graupner, Pullman		0	11	19	21— 51
C. C. Crispen, Cadillac		0	0	4	76— 8 0
CLASS C.—RUNABOUTS COST	ING S	\$2 000 A	AND O	VER.	
Stuart Lafean, Pullman	0	0	0	0	6— 6
R. H. Croninger, Pennsylvania		0	0	0	11— 11
A. H. Bitner, Rambler		0	0	0	17— 17
C. J. Swain, Apperson		0	0	13	5— 18
E. G. Irvin, Pullman		0	0	9	56— 65
CLASS D.—RUNABOUTS COSTI	NG L	ESS T	HAN \$	2, 000.	
C. C. Cumbler, Pullman	_	0	0	0	0— 0
F. K. Mears, Atlas		132	0	0	15—156
John Sellers, Maxwell	. 80	0	66	0	66—212
A. A. Jones, Ford	. 0	107	0	243	96446
C. C. Conklin, Pullman	88	2	325	35	29—479

THIRTEEN WAS THE LUCKY NUMBER

That Many Perfect Scores Made in Detroit's Three Days' Run—All Sorts of Roads Encountered.

With 32 starters, all but two of which finished, and 13 of that number with perfect scores, the three days endurance run conducted by the Detroit Automobile Dealers' Association on April 29, 30 and May 1, over 435 miles of variable roads was a success—such a success that it cannot be compared with the endurance run held last year. The outcome of the three days' run was so favorable that the dealers talk of holding a non-stop endurance run over somewhat the same course later in the season.

Because thirteen of the competing drivers finished without a mark against them the association decided to not split hairs in an effort to award the cup, but instead will engrave the names of the thirteen on the trophy and hold it for future competition. The perfect scorers were Davis (Franklin), Grant (Thomas), E. J. Chapman (Northern), Kelsey (Maxwell), Mochesky (Thomas), H. K. Sheridan (White), House (Northern), Day (Pierce-Arrow), Aubel (Oldsmobile), Lane (Stoddard-Dayton), Lorimer (Thomas), F. E. Crum (Oldsmobile), and Bemb (Peerless).

Starting at 6.30 a. m. Wednesday, 29th ult., 32 cars left the Hotel Tuller in Detroit, at intervals of two minutes, for the first day's run to Saginaw, 140 miles. All kinds of roads were encountered, those between Saginaw and Bay City being so bad that several of the cars lost points. In many places the mud was more than hub deep and it is a wonder that more scores did not sink when the cars did. One of the Brush runabouts came to grief near Lapeer, just before reaching the noon control at Flint. The conditions of the run were not exacting. The cars were all competing as one class, the only requirements being that the runabouts had to carry at least two persons and the touring cars at least three persons. The time allowance was made on a basis of 15 miles an hour, and lateness at controls, beyond a ten minutes leeway meant a deduction of one point per minute, while repairs, adjustments and replacements were charged at the rate of one point per minute.

Lobdel's Brush runabout was the only car that did not check in at Saginaw at the finish of the day's run, but several drivers had points marked against their original 1,000 points. While ploughing through the deep mud just outside of Saginaw, Houston's Pope-Hartford hit a stump, which caused the starting crank to bend. It took 14 minutes to straighten it and these were the only points he lost on the run. White's Cadillac and Scott's Ford each lost one point, and Neumann's Welch lost 11

points on the first leg of the course. Machesky's Thomas finished on time despite the fact that it stopped some minutes to fish the Brush runabout out of a creek into which it had skidded.

When the second day's run ended at Kalamazoo on Thursday night, 152 miles having been covered from Saginaw, 16 of the original number of starters still had perfect scores. The worst roads were encountered between Saginaw and Lansing, where the noon control was located, but from the State capital to Kalamazoo was comparatively easy going. The drivers who fell from the clean sheet brigade in the second day's journey were: Garland (Cadillic), Mandell (Brush), McCalmont (Jackson), who quit. Schofield (Stevens-Duryea), Young (Stevens-Duryea), Bleasdale (Maxwell), Gilmore (Mitchell), Cunningham (Ford), Schiefler (Jackson), and McMullen (Cadillac.

Although several cars suffered a further reduction in scores on the last leg, from Kalamazoo to Detroit, 143 miles, only three of the perfect scores were reduced. These were Lemmer's Cadillac with 8 points; E. H. Chapin's Northern, with 1 point, and Seidler's Jackson, disqualified. Chapin's loss of one point came about in an unusual manner. He adjusted a spark coil unit, which required just 30 seconds to lose one point.

In the final adjustment of penalties Miloch's Cadillac was boosted from 453 points to 725 points, it being found that but one-half hour was taken in changing the spindle instead of five hours as was marked on the observer's card. Schuffield's Stevens-Duryea also was charged with one additional point for taking off a fender, and Harry Cunningham (Ford) lost 30 points for making repairs caused when the car went through a broken bridge through no fault of the driver. This revised summary follows:

Davis, Franklin	1,000
Lane, Stoddard-Dayton	1,000
Day, Pierce-Arrow	1,000
Sheridan, White	1,000
Grant. Thomas	1,000
Bemb. Peerless	1,000
E. J. Chapin, Northern	1,000
Kelsev, Maxwell	1.000
Michesky, Thomas	1,000
House, Northern	1,000
Aubel, Oldsmobile	1,000
F. E. Crum, Oldsmobile	1,000
White, Cadillac	999
E. H. Chapin, Northern	999
Schuffield, Stevens-Duryea	996
McMullen, Cadillac	999
Lemmer, Cadillac	992
Neumann, Welch	989
Scott, Ford	989
Houston, Pope-Hartford	986
Young, Stevens-Durvea	981
Cunningham, Ford	947
Garland, Cadillac	939
Mendall, Brush	813
Miloch, Cadillac	725
Bleasdale, Maxwell	688
Schiefler, Jackson	618
Gilmour, Michell	464
McCalmount, Jackson	.Out
Lobdell, Brush	. Out
Siedler, JacksonDisqua	lified
•	

TROOPS WILL GUARD THE COURSE

Big Preparations for Bridgeport's Annual Climbfest at Sport Hill—Nine Events on the Card.

Probably no event to be held on Decoration Day, May 30th, will attract more attention than the hill climbing contest on Sport Hill, near Bridgeport, Conn. The hill climb is an annual fixture of the automobile Club of Bridgeport, and last year Joseph Tracey was the stellar attraction, making the best time in the gasolene class.

More attention has been given to details for this year's climb than to any that have preceded it. The announcement was made this week that arrangements have been effected to have the course thoroughly patrolled by militia. The soldiers will be under the command of Captain George E. Hawes of the Fourteenth Company, Coast Artillery Corps, C. N. G. The soldiers will be in full uniform and carry the regulation rifle. As they will be sworn in as special constables they will have more power than appears on the surface. This will be a feature in automobile contests, as it will be the first hill climbing contest in America where State troops have been used to guard the course. Besides the soldiers there will be a force of Easton deputies and constables who will act as signalmen.

The first event will be started at 8 o'clock in order to have the meet concluded by noon, as the soldiers will have to participate in the Decoration Day parade which is to be held in Bridgeport in the afternoon. The course will be thoroughly oiled before the contest, and the mile incline officially surveyed. The course will be open to competitors for practice between the hours of 5 and 8 a. m. during the week before Decoration Day.

The committee made known its program this week. It consists of nine events, as follows: Class 1, gasolene cars, \$850 and under; class 2, gasolene cars, \$851 to \$1,250; class 3, gasolene cars, \$1,251 to \$2,000; class 4, gasolene touring cars, \$2,001 to \$3,000; class 5, gasolene runabouts, \$2,001 to \$3,000; class 6, gasolene cars, \$3,001 to \$4,000; class 7, gasolene cars, \$4,001 and over; class 8, free-for-all; class 9, Crauford cup for amateur drivers of gasolene cars.

The Crauford cup is offered by Robert B. Crauford, who won the Yale cup last year, and, as stated, is for amateurs.

Planning 300 Miles Race for Denver.

Although the course has not yet beet made public, it is expected that a 300-miles road race for stock chassis will be held in the vicinity of Denver, Colo.. on Decoration Day, May 30th. G. A. Blanchard, for several years identified with automobile interests in Colorado, is promoting the contest.



OHIO LAW NEARS COMPLETION

Will Establish State Regulation and Prohibit Local Enactments—Flat Rate Fees and Speed Limitations.

If the Ohio State Senate concurs in the amendments which the House has made to the automobile measure known as the Ward bill, the Buckeye State soon will have what is to be known officially as the "automobile law." One of these amendments gives a person run down by a motor vehicle the right to bring suit in the county wherein the accident occurred instead of in the county where the owner of the machine lives; another compels the owner of the car or the chauffeur to stop and give his name and address if requested by any person injured by the car; a third requires the display on the car of only two lighted lamps at night. whereas the original bill required the carrying of a red light in the rear as well.

The bill as it stands establishes a system of State licenses for machines and chauffeurs. It relieves motorists from danger of arrest for violation of local ordinances, which it repeals, and it forbids municipalities, townships and counties making speed regulations or other restrictions.

Owners and lessees of motor cars are to pay annual licenses of \$5 to the Secretary of State, manufacturers and dealers, \$10 for each make or style of machine, with \$2 each for duplicate certificates of the single numeral assigned to each style of motor, and chauffeurs \$2.

The Secretary of State is to furnish the county clerk with the list of registered machines and chauffeurs belonging in the county and also a sort of blacklist of the owners and chauffeurs who have been convicted of violating the law. This will enable the local courts to ascertain whether they are first or second offenders.

Every motor vehicle must carry its number in front and behind, and from half an hour after sunset to half an hour before sunrise two lighted lamps. Each chauffeur must wear an oval aluminum badge, and both he or any other person may be fined for carrying off a machine without the permission of the owner. Chauffeurs are subject to fine and imprisonment, as are owners of machines, and in addition a chauffeur may be suspended from the right to do business for 30 days on the second offense, and a year on the third offense.

The speed limits are eight miles in the business portions of municipalities, 15 mles in other parts of town, and 20 miles on country roads. The operator of a motor car must stop on signal when meeting or overtaking a horse-drawn vehicle or person or horseback, but need not stop longer than necessary for the safe passage of the two vehicles. Both carriages and automobiles on meeting either carriages or automobiles

must give half of the road, and persons on horseback or bicycles must give two-thirds of the road to carriages or automobiles.

Revenues for licenses shall be quined into the State good roads fund. Residents of other States which have automobile laws substantially like the Ohio law need not comply with the Ohio law, provided they comply with their own law while motoring in Ohio.

What the Legislature Did About Roads.

In the closing hours of its session the New York State legislature appropriated \$3,000,000 to be used for the development of good roads. State Engineer Skene had asked for \$7,000,000 for this purpose and on finding that only \$3,000,000 had been appropriated for this year, only \$1,000,000 of which is immediately available, and \$2,000,-000 in October, has written to the governor that the appropriation and the conditions under which it is given make it absolutely of no use for its intended purposes. In his letter to the governor the State engineer calls his attention to the law which requires that all appropriations for road building must be divided among 46 counties and the \$1,000,000 now available for the purpose would build only from one to three miles in each county.

Among the laws enacted by the legislature was one providing for the creation of a department of highways which will be created on the 10th of January, 1909, by the incoming governor, who will appoint three commissioners, one each for a period of two, four and six years respectively, thereafter all terms to be for six years. It will be their duty to work out the intelligent development of the highways of the State of New York, and they are particularly charged and given power to create a department which shall have nothing to do but maintain roads when once they are built.

Tax Assessor Discouraged by Cheap Cars.

County Assessor Shriver, of Douglass county, Nebraska, is disgusted. In fact, he has almost made up his mind to close out and move into some other county. For years the assessor has prided himself on living in a county where nothing but the best is used, but something has happened to change his mind. Shriver has just finished assessing automobiles, and although there are 392 cars in Douglass county, not one of them is valued at more than \$500 by the owners, the valuations ranging from \$150 to \$500. The assessor had thought that several \$6,000 cars were owned in Omaha. at any rate, but now concludes he must have been mistaken, and that Douglass county is "cheap" when it comes to automobiles.

Race Meet for Salem's Mile Track.

It was announced this week that the Salem Horse Show and Athletic Association will hold a race meet in Salem, N. J., on May 30th. There is a mile track there which will be employed.

INDIANAPOLIS "SQUEEZE" UPHFLD

City Ordinance Imposing Local Tax on Automobiles Declared Valid—Dealers Give up the Fight.

Judge Allen, sitting in the Circuit Court of Indiana, has sustained the validity of the Indianapolis ordinance which provides for a local annual tax of \$3 on all automobiles used within the city limits.

To bring the matter to a decision, one of the automobile dealers was fined in Police Court for failure to pay the city license fee of \$3, and he appealed his case. On the appeal, the dealer filed a demurrer to the city's complaint, raising two points—the question of whether the ordinance conflicts with the State law, and whether the wording of the ordinance, which says horseless carriage," covers motor trucks.

Judge Allen, of the Circuit Court, overruled this demurrer, holding that the ordinance does not conflict with the State law, inasmuch as the former is a revenue measure, solely, to raise funds for street pavement maintenance, while the State law is a police regulation. This was the point made by the city in the case, so that its contention seems to be clearly upheld by the court's ruling.

City Controller Greunig said that, since Judge Allen had upheld the city's contention in regard to the ordinance, all automobile owners would be compelled to pay the \$3 fee required. The dealers have decided to accept Judge Allen's decision.

Must Not Sell Gasolene on Sunday.

Automobile owners in East Orange, N. J., and more than 200 cars are owned in that city, are up in arms over the action of the Common Council in passing a Sunday closing ordinance which will prevent them from purchasing gasolene on that day, should their supply become exhausted. Few of them have facilities for keeping gasolene on their premises, and it has been a general custom to obtain supplies at the nearest garage when starting out for the Sunday jaunt. The garagemen are equally distressed by the new regulation, which means a loss in sales of gasolene.

Automobile Caravan for Denver Delegates.

Automobiles have become identified with the development of political campaigns, but evidence is not lacking that this fall will see even more striking advances in this line than have been witnessed hitherto. One of the incidents of the forthcoming Democratic convention in Denver, next July, will be the arrival of a number of the Illinois delegates in an automobile caravan. Four seven-passenger touring cars and a luggage wagon will be employed for the purpose. A week will be occupied in making the trip from Chicago to Denver.



SHOWS WHAT'S AROUND THE TURN

Device to Prevent Accidents on Intersecting Roads—Simple Application of a Well Known Principle.

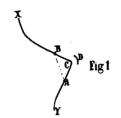
So many accidents have resulted from carelessness in approaching "blind" corners on the highway where the condition of traffic on intersecting roads was hidden because of the character of the surroundings, that it is coming to be recognized as important that steps be taken to safeguard such localities especially where they lie upon roads much frequented by motorists. Abroad, where speeding along the open road is openly indulged in, the danger is much greater than in this country where drivers who are exceeding the speed limit are apt to be more or less careful in approaching such spots owing to the illegality of their driving. Several methods of correcting the evil have been proposed, one of the most striking being that of erecting suitable mirrors at the intersecting corners in such a way that drivers of vehicles coming in either direction are visible to those traveling along an interferring course.

Although recently propounded in England, it is claimed that the idea originated in France, where a well-known motorist took out patents on the system which is here described several years ago. The principle upon which the system is based is readily apparent from Fig. 1, where the position and arrangement of the mirror, D, is very evidently such that the driver of a car in the position A, on the road X-Y, could discern the driver of a second car at B, even though the direct line of sight A-B might be obscured by buildings or some natural obstruction.

The type of reflector necessary to accomplish the desired purpose would be planoconcave in form, and for purposes of economy is made up of a series of rectangular panes mounted in a curved frame as shown in Fig. 2. A series of vertical sashes or Tirons, b, are placed in the framework, to form guides into which the afit plates, a', are slid, seating below in the bottom plate, c, and being covered above by the closing piece, d, while for purposes of protection a screen, e, is also placed in front of the plates. The general appearance of the mirror and its standard is shown in Fig. 3, which also indicates that the arrangement need not of necessity be in any way a disfigurement to the landscape.

The curve of the framework, to which the glass plates conform as closely as possible, is laid out with respect to the angle of the intersection and is arranged to reflect a distinct image of each of the approaches to the turn in the direction of the other. A point which should be mentioned in this connection is that the advantages of the

arrangement at night would be even greater than in the daytime, since the headlight beam from approaching cars would be thrown directly in the drivers' eyes, rendering the danger signal very effective. In daylight, of course, the system would be of no avail unless one or the other of the drivers were to look directly at the mirror.

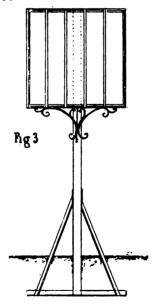


At night, the sudden flash of light would serve as an unmistakable warning.

Of other proposed means of protecting highway intersections, the most readily suggested and at the same time, the most difficult of achievement relate to the clearing of the ground in the immediate vicinity of the corner for a space sufficient to enable drivers to watch the intersection for some



little distance on either side of the turn To effect this, legal provisions would have to be made in most cases, while frequently the enforcement of even a perfectly satisfactory law would be accompanied by many difficulties and endless expense. Hence, as a simple and comparatively inexpensive method of protection the system in question would appear to be the most practical solu-



tion of the difficulty. A further adaptation of the idea might include a comprehensive and accurate sign board system with roadmarkers to be mounted over each mirror, in which case, the attention of drivers would be more likely to be attracted to the latter than if they stood by themselves.

COMPLETE ELECTRIC PLANT ON CAR

New Ignition System Which Produces Its
Own Current—Automatic Lighting and
Original Indicator Devices.

While electricity performs an indispensible part in the operation of automobiles, its chief servce has been in connection with the explosion of the charge in the cylinder. As the development of motor cars progressed, electricity came into common use for the illumination of limousine bodies, and occasionally for side and head lights, and in the operation of various accessories, but it has remained for the Witherbee Igniter Co., New York, to show the manifold use which could be made of electricity in connection with automobiles, and recently this company equipped a car for M. R. Hutchison with the most complete electrical installation ever put in an automobile.

This electrical equipment consists of two Witherbee No. 86 batteries connected in series, located under the rear seat of the machine. The batteries are charged by dynamo situated under the front floor boards. A wood split pulley, attached to the shaft between the clutch and the gear box, together with the belt, drives the dynamo and air compressor, which inflates the tires and operates the pneumatic jacks for raising the machine. In addition to the dynamo there is a Wico charging device located on the running board, which enables the driver to charge the storage battery from any electric light socket.

The headlights are equipped with stereopticon incandescent lights, which can be turned off or on at will. The side and rear lights are fitted with small incandescents.

By each of the side doors of the tonneau there is a lamp turned on automatically when either door is opened, lighting the way into the tonneau where another lamp operates simultaneously by the same means, illuminating the interior.

By raising the bonnet of the engine four lamps on either side of the motor are automatically turned on. There is also a lamp in the pan under the engine, and also lamps beneath the chassis which are turned on from the switch board.

On the dash board are five lamps, illuminating the speedometer, ammeter, volt meter, pressure gauge, oil feed drips and clock.

Attached to each wheel rim is a device which indicates when the air pressure in the tires is below 60 pounds, by sounding one of the electric horns attached to the dash. An indicator on the dash locates the trouble instantly. The same horn blows, and the same indicator operates when any bearings are hot, the water in the radiator gets low, the oil in the oil box gets half empty or when the gasolene gets down to five gallons.

Putting on either of the foot brakes or



the emergency blows an electric horn attached to the rear of the car, and drops a sign "Stop." As soon as the brake is released, the horn blows and the sign disappears.

There are four lights in the folding top which may be turned on when they are needed.

On each end of the rear seat, and on the back of the front seat there is an electric cigar lighter. Situated near each of the wheels are extension lamps, for use about or under the chassis.

In the rear of the car is a box with a celluloid front, through which the license number for whatever state the car is in is visible. These numbers are painted on a curtain, and can be turned at will.

The signaling equipment consists of three Klaxon horns, and when all three are going, they can be heard for a mile distant. If the occupant of the tonneau wishes to speak to the driver, a special telephone transmitter is used, and the electric horn on the dash proceeds to talk in a loud clear tone. If the driver wishes to say a few things to a teamster, it is not necessary to waste strength shouting. He simply speaks into his transmitter and the electric horn on the mud guard repeats his words loud enough to be heard at a distance of several blocks, thus making intended warnings fully intelligible.

Automobile Transportation for Live Sheep.

In connection with the development of Punta Arenas, the southernmost, and only free port of Chile, considerable stress is being laid on the possibilities of developing the business of exporting mutton to foreign markets, a line of steamers having been arranged for to transport the dressed carcasses to the London wharves. A feature of the scheme, which is a most comprehensive one, is the use of motor traction for getting the sheep to the shipping point. Four 40 horsepower traction engines, of German construction have lately been put into service between Punta Arenas and the up-country ranches, some of which are 100 miles inland. Each of the machines is capable of drawing a train of three or four loaded wagons across the plains at a rate of four to six mile sper hour.

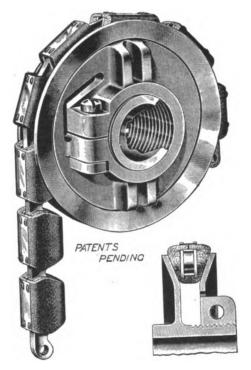
Prince Henry Invents an Accessory.

Even royalty has taken a hand in inventing automobile accessories. Prince Henry of Prussia has applied for a patent on a device to keep mud and moisture from obstructing the view through glass wind shields. The apparatus is very simple, consisting of two arms equipped with rubber edges. The arms are fastened on pivots on either side of the wind shield. A handle is located within convenient reach of the driver, and by turning this handle the rubber edges are moved over the glass, much in the manner that window washers employ when using a somewhat similar device on large store windows.

NEW SYSTEM FOR FAN DRIVING

How the Whitney Chain Belt Meets a Trying "Little" Problem—Its Characteristics and Adaptability.

What has come to be regarded as a most trying "little" problem in connection with automobile design is the construction and maintenance of the transmission to the radiator fan. A wide variety of driving principles have been adopted for the purpose at one time or another, yet owing to the peculiar conditions encountered, more or less trouble has been experienced with nearly all



of them. On this account no little interest centers about an entirely new system, which possesses the desirable features of uniform and powerful traction, a tension adjustment without idlers and independent of the center-to-center distance of the pulleys, and which while being absolutely free from "bending resistance," also is inelastic in the direction of its length and non-stretchable. These advantages are embodied in the new chain belt, which has just been developed by the Whitney Mfg. Co., Hartford, Conn.

As its name implies, this is merely a block chain shod with leather contacts of V-section, which envelop each pair of side plates and adapt them to run over a grooved pulley of approved form. The result is a transmission embodying all the advantages of the V-belt, without its stretching propensities, and also minus its resistance to bending. It may be run over pulleys of large or small diameter with equal facility, requires no idler for taking up the slack, and is adaptable to sheaves which are separated by a fixed distance. Whatever

tension adjustment is required by the wear of the leather shoes, is made by altering the distance between the flanges of one of the pulleys, thus causing the belt to travel a greater or less distance from the center.

The details of belt and pulley construction are shown by the accompanying illustration. The leathers, which are of special shape, are bent over their respective links, and secured by locking plates, which are embedded in their surfaces, and fastened by projections of the side plates, which are headed over. Prongs on the under side of the locking plates also engage the leather, making the fastening still more secure. In this way, an all-leather to metal friction contact is secured, while the rigidity and flexibility of the chain in the radial sense is unimpaired.

In the construction of the adjustable pulley one flange is formed on a collor threaded over the main hub or boss. It is split and fitted with a locking screw so that it may be fixed in any desired position, its adjustment determining the line of contact between the belt and flanges.

Besides being useful for purposes of fan driving, the chain belt also is adaptable to a wide variety of purposes in driving the different auxiliaries on the motor car. It also is adaptable to multiple uses in connection with power plants.

Encouraging Intelligent Care of the Car.

A novel method of encouraging chauffeurs to take care of their cars, with special reference to the subject of lubrication, has been adopted by a foreign manufacturer. Dating from May 1st owners of this particular make of automobiles were requested to permit a representative of the manufacturer to pay unexpected visits to their garages. The inspector will make an examination of the automobiles and will observe the condition of the cars making special note in regard to lubrication. At the end of the year the ten drivers, whose cars have received the best reports, will be awarded \$125 each.

Separate Receptable for the Carbide.

When cars are equipped with acetylene generators it is far better that the carbide should be carried in a separate receptacle rather than in the generator when the latter is not being used. As carbide is keenly susceptible to atmospheric conditions, it is absolutely essential that it should be kept perfectly dry until the gas which it generates is wanted for illuminating purposes. In the generator in which water is contained, the proximity of the water to the carbide usually effects the latter, and when gas is required it frequently is found that the generating power has been exhausted.

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.



WHAT IS GOING ON IN CLUBDOM

Preparing to Fight Jersey's New Law—San Antonio to Have Race Meet— Elections of Officers.

There was no opposition to the election of Paul E. Heller as president of the New Jersey Automobile and Motor Club of Newark, at the annual meeting on Monday night, and aside from the passage of a resolution authorizing the board of trustees of the club to contribute a certain sum to a fund that is being raised to test the constitutionality of the New Jersey automobile law and contributing \$150 to a local hospital, the The retiring meeting was a quiet one. trustees presented H. A. Bonnell, the retiring secretary, with a superb silver service as a token of appreciation for his valuable services. The new officers of the New Jersey club are: Paul E. Heller, Newark, president; W. Olive Crosby, East Orange, vice-president; Dr. James R. English, Newark, treasurer, and A. B. Le Massena, Hoboken, secretary. The five trustees, who were re-elected for a term of two years, were William C. Shanly, Dr. Frank B. Meeker, Frederick A. Croselmire and A. G. Scherer, Newark, and H. A. Bonnell, East Orange. The two hold-over trustees are Joseph H. Wood and W. F. Kimber.

An elaborate race meet, to equal the Vanderbilt and other classic road races, was talked of at the annual meeting of the San Antonio (Texas) Automobile Club, and a committee was empowered to sound the business men of the Texan city as to the feasibility of the project. At the meeting officers were elected as follows: President, Dr. W. B. Russ; vice-president, H. E. Ogg; secretary, Dr. George M. Fairfield; directors, R. W. Carr, E. R. Richardson, Dr. W. B. Russ, Dr. E. J. Fieldin, Dr. George M. Fairfield, H. E. Ogg and C. C. Cresson.

At an enthusiastic meeting, attended by more than 100 owners, the Columbus (O.) Automobile Club was formed last week. The work of organization was due chiefly to the efforts of the Ohio State Automobile Association, of which the new club will become a member. Officers were elected as follows: President, Max Morehouse; first vice-president, P. B. Monypenny; second vice-president, Dr. George P. Stephenson; secretary, Herman A. Hoseter; assistant secretary, A. Miller; treasurer, E. M. Schoenborn

At its annual meeting the Iowa Automobile Club of Des Moines decided to hold an endurance contest, but the selection of a date was left until a future meeting. Officers were elected as follows: President, John Gibson; first vice-president, L. Aulman; second vice-president. W. W. Sears; secretary, Cheney Prouty; executive committee, E. T. Meredith, Vere Reynolds and Harold Wells.

The following officers were elected at the annual meeting of the Mankato (Minn.) Automobile Club: President, John H. Hohmann; vice-president, F. K. Meagher; secretary, Frank Brett; treasurer, B. Bangerter, Jr.; trustees, George M. Palmer, C. Saulpaugh, and G. A. Lewis. The club shortly will publish "a book of rules for the running of automobiles," which will be distributed to the members.

Forty automobilists of Kankakee, Ill., have organized the Kankakee Motor Club with the following officers: President, H. A. Magruder; vice-president, Louis Beckman; secretary-treasurer, Dr. C. K. Smith; directors, Alden Brown, George Fortin, Henry Volkman and F. D. Martin. The last named was made chairman of the membership committee.

Mason City, Iowa, now has an automobile club, the Midland Automobile club having been formed with the following officers: President, A. J. Zingre; vice-president, J. F. Emery; secretary-treasurer, W. H. Hathorn.

The Grand Rapids (Mich.) Automobile Club has elected these officers for the ensuing club year. President, Dr. Emmett Welsh; vice-president, J. R. Jackson; secretary, Dr. William Burlson.

Memorial Day Race Meet at Readville.

Prospects for an interesting race meet at the Readville track at Boston on Memorial Day, May 30th, appear in a preliminary announcement by the race committee of the Bay State Automobile Association that it will promote a meet on that date. The events as arranged are seven in number, five for automobiles and two for motorcycles, as follows:

Five miles open to stuck gasolene touring cars of from 24.1 to 40 horsepower. Five miles open to stock touring cars from 40.1 to 60 horsepower. Five miles open to all gasolene runabouts, irrespective of horsepower. Twenty miles open to stripped stock chasses. Five miles handicap. Five miles open to single cylinder motorcycles. Five miles free-for-all, motorcycles, open to all classes.

Women to Make Transcontinental Tour.

And now the transcontinentalette! On Thursday next, 14th inst., two women-Mrs. E. E. Teape and her daughter, Mrs. Vera McKelvie, of Sands Point, Idahoare due to start from Portland, Maine, to make a 4,000 mile trip across the continent to Portland, Ore. Their route will be via Boston, Springfield, Albany, Syracuse, Buffalo, Cleveland, Chicago, Des Moines, Cheyenne, Salt Lake City, Ogden, Boise City and Baker City, to Portland. The undertaking is worthy of remark in that so far as is known it is the first trip over this route, and also because these two women will be the first to attempt such a long journey unaided by men. They will drive a two-cylinder runabout and will take things leisurely.

NEW NAME FOR THE CARBURETTER

Amusing Proof that "a Little Knowledge is a Dangerous Thing"—Ludicrous Blunder in Technical Terms.

It long has been said that "a little knowledge is a dangerous thing." To this statement might be added something to the effect that the possessor of a "little knowledge" is apt to make himself ludicrous, as the following incident serves to show.

To a city official had been assigned a municipally owned automobile and a municipally employed chauffeur. The machine was of ancient vintage, but the driver was as fresh as a new laid egg. The combination was one that probably would be the means of causing the official much weeping, wailing and gnashing of his store teeth, for he was an elderly man who was "sot" in his ways and not favorably disposed toward motor cars or vehicles masquerading as such.

One of the chief characteristics of the official was his willingness to talk with anybody on any subject under the sun. It mattered not whether the topic was religion, politics, mechanics, or anything else, he would enter the discussion with a vim and an assurance of manner that usually impressed his hearers with a belief in his knowledge of the subject. Naturally his friends, even those who knew he had never before ridden in an automobile, were not surprised to hear him hold forth on spark plugs, cylinders, pistons, water system, pumps, etc., after two or three days of riding in his recently acquired machine.

The machine had been in use a week or two, when one day the chauffeur, wanting the afternoon for himself, caught his heel in the ground wire, and disconnected it. At the time of the "accident," the boss was en route to keep an appointment with the head of the department and the stopping of the machine in the outlying district, far from trolley cars was a decided inconvenience. He telephoned at once for his horse and carriage, and finally drove away.

While waiting for his carriage, he had watched the chauffeur, who apparently was looking for the trouble, and while looking, the latter was imparting much information. When the official reached his office he called up his superior to explain his failure in keeping the appointment.

"What was the matter, Mr. Blank? It is anything that will lay up the machine for a while?" asked the executive, over the 'phone.

"No, I think not," responded Mr. Blank? I didn't make a complete examination, but from the way the engine acted I think there must have been some water in the fumicator." And Mr. Blank, for a long time, wondered what caused the road of laughter that greeted his diagnosis.

SIXTEEN CONTESTANTS WON CUPS

Triumphed Over Rough Roads and Frequent Fords in Baltimore Sealed Bonnet Contest—Sixteen Failed.

When it first thought of promoting a scaled bonnet endurance contest for automobiles the Baltimore newspaper that did conduct one on Saturday last, 2d inst., evidently did not take into consideration the reliability of present day motor cars. Quite frankly, it did not expect any of the 32 cars that started in the 147.8 miles run from the Monumental City to Hagerstown and return to finish with absolutely clean sheets; or, if any, then not so many as did. For be it known that of the 32 starters exactly one-half of that number completed the journey over hills and roads that are not by any means boulevards without a single count against them. In view of this the promoters, instead of the three cups for the highest scores, will give each perfect scorer a cup for himself.

The test was a success as well as a revelation. It was the first that had ever been conducted in Maryland, but it will not be the last of the sort, as President Reese, of the Automobile Club of Maryland, has announced that the organization will conduct a similar contest next fall.

The test reminded one of the drivers of the sandwiches he used to get at a charitable institution which he was investigating in the pursuit of his socialogical studies. The roads were like those sandwiches-"they were good at the start and good at the finish, but they were atrocious in between." Which, in a large measure, explains why the other half of the starters failed to finish with perfect scores. When the mountains were reached the better stretches of roadway were like that side of Pen Mar known as the devil's race course; the worst parts cannot be described. Ruts, boulders, cliffs, holes, logs, marked them and the occupants were bumped, jolted and bruised, as well as soaked and drenched when the cars plunged into the many fords that had to be crossed.

The route on the out trip was from Baltimore to Westminster, through Fritzell, Tryone, Copperville, Taneytown, Bridgeport, Emmitsburg, Eyler, Lantz, Foxville, over the Blue Ridge mountains to Cavetown, to Shewsville, and then to Hagerstown, most of the cars arriving at the last named place before noon. So far as scenery is concerned a more beautiful route could not have been chosen. The return trip was made via Middletown, Frederick, New Market, Ridgeville, Ellicott City and finishing at Baltimore. The first car arrived at 2.30 p. m., and the last car of the perfect scores checked in at 6.32. A shower was met on the way back, but it did not hinder the contestants. Twelve hours was the allotted time for perfect scores, and the sixteen that finished without marks against them were as follows:

Howard Gill, Thomas; Wallace Hood, Thomas; Hardesty, Packard; Lorido, Locomobile; McCormick, Oldsmobile; J. White, Buick; Tremblay, White; William Keyser, Packard; Hall, Franklin; Clarke, Pierce-Arrow; Foster, Cadillac; Cody, Thomas; R. F. Kayler, Ford; Barker, Packard, T. F. Goodwin, Winton, and P. Reese, Jr., Royal Tourist.

Program for the Giant's Despair Climb.

The hill climb committee of the Wilkes-Barre (Pa.) Automobile Club made known this week its program for the third annual Memorial Day hill climb up Giant's Despair mountain. It is even more elaborate than the card last year, and includes twelve events as follows: Open to gasolene stock cars selling for \$850 or less; open to gasolene stock cars selling for from \$851 to \$1,250, inclusive; open to gasolene stock cars selling from \$1,251 to \$2,000; open to gasolene stock cars selling for from \$2,001 to \$3,000, inclusive; open to steam or gasolent stock cars selling for from \$1,250 to \$3,000; open to gasolene stock cars selling for from \$3,001 to \$4,000; open for fourcylinder stock cars selling for \$4,000 or over; open to six-cylinder stock cars selling for \$2,500 or over; free-for-all, open to cars of all types and motive power; open to gasolene stock chassis not exceeding a total piston area of 103.87 square inches, all Briarcliff models eligible; open to steam cars only; open to cars owned by members of the Quaker City Motor Club.

Four-Mile Circuit for a Road Race.

Although it has never been in favor of track racing the Indiana Automobile Club has signified that it is in favor of road racing by arranging a big race over a four mile circuit around Riverside Park, Indianapolis, on July 4th. Although the preliminary announcement has only been made many of the details have been worked out. The course selected is in view from a certain point for about three-quarters of the distance and here it is proposed to erect a big grandstand. It was announced that 150 special policemen will guard the course. Carl G. Fisher has offered a \$500 trophy for the race which will be for stock chassis.

Albany to Have Its First Hill Climb.

The Albany (N. Y.) Automobile Club will hold its first hill climb on Menand hill, near that city, on Saturday afternoon, May 23d. Eight events are carded, as follows: Gasolene cars selling for \$850 or less; gasolene cars selling from \$851 to and including \$1,250.; Gasolene cars selling from \$1,251 to and including \$2,000; gasolene cars selling from \$1,251 to and including \$3,000; steam, gasolene or electric cars selling from \$2.001 to \$3,000; gasolene cars selling from \$3,000 to and including \$4,000; six-cylinder cars selling for more than \$4,000.

SAILORS TREATED TO A SANFEST

"Fighting Bob's" Men See Lively Racing at Long Beach—Close Contest in the Free for All Event.

One of the features of the entertainment of the fleet now in California was a race meet at Long Beach on Friday, 24th ult. Although no records were broken the thousands of sailors and officers, to say nothing of all the Long Beach resorters, thoroughly warmed up to the sport. A course 2½ miles long had been measured on the sand and the beach was hard and firm.

The most exciting event was the free-forall for stock cars, which was won by George Barnes, driving a Haynes. Barnes took the lead at the start and was never headed although Harrison, in the Oldsmobile, gave him a hard fight right up to the tape. The race resulted in a challenge by Dan Kuhl, whose Mercedes had won the previous event, but when Barnes got the money ready, it is stated that Kuhl could not be found. The summaries:

For two cylinder runabouts carrying two passengers—Won by C. M. McKeague, Duro; second, D. W. Hawthorn, Dolson; third, J. McKenzie, Reo.

For two cylinder touring cars, carrying four passengers—Won by F. M. Varney, Tourist. Time, 3:41½.

For four cylinder cars, 20 to 40 horsepower, carrying four people—Won by H. O. Harrison, Oldsmobile; second, G. F. Grant, Tourist.

For touring cars carrying four people—Won by Dan Kuhl, Mercedes.

Free-for-all stock cars—Won by George Barnes, Haynes; second, H. O. Harrison, Oldsmobile. Time, 3:003/5.

Motorcycle sweepstakes—Won by Allen Murphy, Indian; second. Clarence Clayton, Indian; third, Frank Klecker, Racycle.

Races to Celebrate Subway Extension.

That portion of Jamaica, Long Island, designated as Hillside avenue, will for once in the history of automobiling be free from arrests for speeding one day next month. There are, perhaps, more arrests made every Sunday over this road than on any other boulevard on Long Island, but on Friday afternoon, June 5th, the motorcycle policeman will be minus an occupation. In celebration of the extending of the Brooklyn subway to Jamaica the committee in charge of the jubilee has decided to promote a series of mile time trials on Hillside avenue. The fact that Fred J. Wagner virtually is in charge of the affair and that the Long Island Automobile Club is taking an active interest in it, presages success. The trials, for all classes of cars, will be held over a mile straightaway stretch, allowing one mile for a flying start and a mile beyond the tape to slow down.



NEW TRACK-CARRYING TRACTOR

Radical Departures in Construction of Heavy Cross Country Vehicles—Features of the System Adopted.

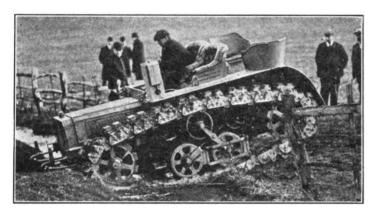
Problems connected with motor traffic outside the confines of the highway are not, as a rule, of appreciable interest to the average motorist. Nevertheless in vehicles intended for use in connection with military manoeuvres and for agricultural purposes, they are of vast importance. Several different types of vehicle have been designed for cross country operation, all of which are based upon the principle of increasing the amount of surface in contact with the

the chain, at all times presents a smooth path for the supporting wheels to roll upon, while the exterior is fitted with resilient supporting blocks, to afford traction and relieve the inequalities of the ground to a certain extent, as well.

From the accompanying illustration the general arrangement of the machine will be apparent. The chain, D, is carried by the sheaves, A, and B, the former of which is geared to the motor and drives the chain by the meshing of cogs on its periphery with the ends of the pins by which the members of the chain are articulated. The sheave, B, is moveable so that the tension of the chain may be adjusted according to requirement, while the slack of the upper side is taken up by an adjustable idler pulley, E. The entire weight of the vehicle

means of secondary links, of similar construction, which served the purpose of distance pieces. The arrangement indicated is applied to both sides of the machine, two complete tracks being formed in this way for the two sets of bearing wheels, and both being independent save for the driving connection, which is made through a differential gearing of ordinary form.

An unusual provision, is that by which steering is effected. In order to accomplish this, the rate of travel of the respective tracks is altered by applying a brake to one side or the other of the differential. This is done through the medium of an ordinary steering wheel, the effect being practically the same as would result from braking one of the wheels of a live axle. It is asserted by the Automobile Journal, in which an ac-





GOING IN AND OUT OF A BROOK

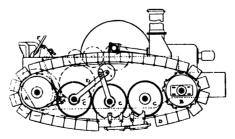
CLIMBING A "ONE IN TWO" CLAYBANK

ground, and also of reducing the unit pressure on that surface. One of the most unique of these is the Hornsby "chaintrack" tractor, which is produced by Messrs. Hornsby and Sons, makers of the Hornsby Akroyd heavy oil engines, which have been favorably known in England for many years. Its principle is that of laying down a temporary roadway or track over which the machine may run, and which is automatically picked up after use and transferred to the forward end of the machine to be used again. It differs from a system of similar nature, at one time proposed in this country, in that the track extends the full length of the vehicle and is so constructed that it acts as a sort of bridge, following the average grade of the ground, and therefore presenting a perfectly uniform path for the load-carrying wheels upon which the vehicle itself is carried.

As far as the construction of the power plant and the tractive and load carrying features of the vehicle are concerned, it is not radically different from the ordinary heavy commercial vehicle. It is, in fact, built for use with either heavy oil or gasolene, according to local demand and possessed the usual transmission and change gear features.

The "track" consists of an endless chain band, running over sheaves at the front and rear ends of the machine, and driven from one of the sheaves only. The interior of is carried by the wheels, C, running on the track formed by the inner surface of the chain.

The design of the chain itself, is particularly unique. Two sets of links are incorporated in its construction. Those which may be termed the main links, consist of heavy castings, cored out on the under side to receive the wooden bearing blocks upon which the machine rests. Upon their upper surfaces they are channeled out to receive the bearing wheels, while at their ends are abutments, so constructd that while unlimited flexure is permitted in a downward direction, the links are rigidly placed with regard to pressures from below. In conse-



35 HORSEPOWER TRACTOR

quence of this, the lower part of the track at all times forms a sort of girder which is capable of supporting the machine from two or more points. Connection between the respective main links is accomplished by count of this machine recently appeared, that the steering device is so successful that it is possible to turn the tractor in its own length, inconceivable though it may seem.

In regard to the performance of the tractor, the same authority mentions a test in which "On swampy ground, a 'lurry' loaded with three tons was hauled by five horses until it sank to the axles, when the horses failed to drag it out. The 30-35 horsepower motor car model, weighing 3 tons 15 cwt., and hauling a trailer loaded with five tons, and equipped with the chain track in lieu of wheels, then proceeded to travel over the same ground, and negotiated it successfully. Horses were subsequently harnessed to the car itself, and succeeded in dragging it across the test ground, notwithstanding the fact that they had failed with the lurry, and also with a twowheeled cart carrying 11/2 tons.

"As a test of its hill climbing capacity, the Chain-Track tractor showed itself to be capable of surmounting a bank of soft clay 20 feet high, having an incline of 1 in 2."

At present three of these machines are in use. One is in operation by the British War Office, and it is stationed at Aldershot, where it is known as "Caterpillar No. 1." Of the two others, one of 20 horsepower, is propelled by an oil engine, while the second, which is shown in the accompanying illustration, is of 30-35 horsepower and driven by a gasolene motor.

SOLVING "USED CAR" PROBLEM

Bowen States a General Difficulty and Explains His System—Making Cars Dependable as Well as Saleable.

"The Motor World's editorial on the 'Used Car Situation' was of especial interest to us because, like a good many other automobile firms, we have been endeavoring to find the right solution of this problem for some time paast," was the observation of Frank H. Bowen, of the Harry S. Houpt Co., New York and New Jersey agents for the Thomas car to a Motor World man. Mr. Bowen's official title being that of "Manager, Used Car Department," his version of the problem itself, and the method of solving it with which he is most familiar, naturally carry no little weight.

"The practice of turning over all secondhand cars to dealers, who make a specialty of handling them, has resulted in their being sold and put on the road without any preparation whatever, although generally in need of a thorough overhauling," he continued, "and a total break-down is bound to result in a short time. The new owner is naturally disgusted, and invariably places the blame on the car itself. In view of this fact we have evolved the following plan, which has eliminated this objectionable feature.

"As soon as the car which has been taken in exchange is received, it is taken down in our own shop, all parts showing wear or misuse are replaced by new parts, and the entire car is reconstructed, taking every bolt and nut into consideration. The car is then taken to the paint shop, where it is entirely repainted and the upholstery redressed.

"When the car has received the final test, both in the shop and on the road, it is placed on sale on the 'used car floor,' at a price which is plainly marked, and from which there is no deviation.

"Our policy is that the owner of a Thomas car is a Thomas customer. The same attention to the upkeep of a second hand car will be given to the new owner as would have been given to the original owner.

"Though this policy has been in force but a short time," he concluded, "these cars have been sold to a very different class of customers than ever before purchased second-hand cars. In fact, the system has brought us into touch with a class of buyers who, in the past would not consider any but a new car."

Paris Shies at Shabby Buses.

Motor omnibuses in Paris are not as popular as they are in London, or other great cities, it would appear, owing to the economical policy of the operating company, which has refused up to this time to install

a proper equipment, or to accede to the demands of the riding public and the landlords along the routes. Consequently the stock of shabby vehicles, said to number not more than a hundred, continues to ply the streets under a growing cloud of disfavor. The unpopularity of the vehicles is due solely to the fact of their being mechanically unfitted for the service which is expected of them, and it is thought that a better equipment would not suffer the same oprobrium. The root of the difficulty rests in the fact that the concession of the Paris Omnibus Co., is to expire in 1910, and that negotiations for the renewal of its monopoly have not as yet been completed.

When the company was persuaded, somewhat tardily, to adopt the use of motor vehicles, instead of ordering a complete new installation of rolling stock, the chassis were specified to fit the bodies of the old threehorse omnibuses, of which a great number were already on hand. Consequently the vehicles are unwieldy and unsightly. This fact, added to the poor maintenance afforded them is responsible for their low standing at present. The public complains of their cramped and vibrating accommodations, while the shopkeepers along their courses complain of the dust they stir up in dry weather and the mud they sling when it rains. That brand of economy which is characterized by its penny-wisdom and pound folly, never is destined to succeed where the traveling public is concerned.

Franklin Truck to be Fitted to Rails.

The possible usages of the motor truck seem to be almost unlimited. The H. H. Franklin Mfg. Co., through the Quaker City Automobile Co., their Philadelphia dealers, have just sold one of their 2,000-pound trucks to the Thacker Coal & Coke Co. This truck will be fitted with wheels with steel flanged rims and will be run upon railroad tracks throughout the Pennsylvania mines and shipping yards of the Thacker Co.

War Department Calls for Supply Wagon.

Specifications have been issued by the War Department covering the construction of a supply wagon for use by the signal corps of the United States army. As evidence of the satisfactory service Franklin motor cars have already given in the service of the United States Government, the Franklin people point out that the specifications for this supply wagon calls for a 24 horse-power air-cooled motor.

The Oakland Car Working Its Way East.

One of the smartest and most attractive cars ever offered for the price, the Oakland, the latest creation of A. P. Brush, has been unduly long in gaining a foothold in the East. A beginning has been made, however, the Bergdoll Motor Co., of Philadelphia, having been allotted a choice parcel of eastern territory and negotiations being under way for New York representatives.

MAY MEAN NEW IGNITION SYSTEM

Phenomenal Qualities Ascribed to Recently
Discovered German Alloy—Its Alleged Free Yield of Sparks.

It it possible that the application of a phenomenon which is at present attracting no little attention in German scientific circles may ultimately lead to the extinction of the electric equipment in connection with the ignition system of the internal combustion motor. If practicable, it would lead to the adoption of an igniter similar to the old-time flint-lock of small-arm history.

"It has been discovered" according to Consular authority, "that an alloy of iron and cerium, lanthanium, or any other of the rare earths (as used in manufacturing incandescent gas mantles) will create luminous sparks on being struck with some metal tool, such as a knife edge, a file, or the like. The shower of sparks given off at the point of impact is sufficient to ignite not only gas, but even a cotton wick saturated with alcohol, and it is possible to utilize these iron alloys for igniting all sorts of explosives. The behavior of these alloys has been found to vary according to their percentage of iron, the sparking reaching a maximum with a content of 30 per cent.'

Such a development would seem almost too economical to be a commercial possibility. At the same time, it is by no means inconceivable that the hammer and anvil igniter with striking points composed of alloys of rare earth and iron may be a feature characterizing motor equipments of the future.

Self-Applying Anti-Skid Shoe.

A recent foreign invention in the non-skid line, is constructed in persuance of a scheme which has been tried on the London omnibuses, in which a chain is suspended along side each of the rear wheels in such a way that when any side slip is developed the chain is pulled under the tire and offers sufficient resistance to check the action. In the new system, a leather strap is employed, which is suspended from a couple of springs attached to the axle in such a way that the center of the loop thus formed lies close along side the tire on the inside of the wheel. A flat plate, made of leather and copiously studded, is attached to the strap at this point, with an offset edge projecting toward the tire. When the skidding tendency is developed, this shoe is immediately drawn under the wheel and forms a positive hindrance to the objectionable action. While more crude, and probably less satisfactory in action, it is to be observed that such an arrangement would possess this advantage over the ordinary anti-skid tire, that present objectionable park ordinances would not affect its use.

FRELINGHUYSEN'S "MASTERPIECE"

Full Text of Revised New Jersey Law-Commissioner Smith Will Recognize Unexpired Licenses.

New Jersey's revised system of "admission fees" and "passports," otherwise the amended Frelinghuysen law, now is in full force, and J. B. R. Smith, the able Commissioner of Motor Vehicles, has his hands full in putting it into effect.

Although one arrest has been made of an automobilist who had a paid-up license under the old law, Mr. Smith has ruled that such licenses and registration certificates shall hold good until one year from their dates. For instance, any "passport" that does not expire until July or September next will be recognized, but for the remainder of the year, the holder must pay the full rate named by the new law.

The full text of the law is as follows:

PART I.

Definitions.

1. As used in this act:
(1) The term "motorvehicle" includes all vehicles ropelled otherwise than by muscular power, excepting such vehicles as run only upon rails or tracks.
(2) The term "motor cycle" includes only motor vehicles having pedals and saddle with driver sitting

astride.
(3) The term "automobile" includes all motor ve-

(3) The term "automobile" includes all motor vehicles excepting motor cycles.

(4) The word "magistrate" shall be deemed and understood to mean and include all justices of the peace, judges of the city criminal courts, police justices, recorders, mayors and all other officers having the power of a committing magistrate.

2. Automobile fire engines and such self-propelling vehicles as are used neither for the conveyance of persons for hire, pleasure or business, nor for the transportation of freight, such as steam road rollers and traction engines, are excepted from the provision of this act.

PART II.

The Construction and Equipment of Motor Vehicles. 3. Every motor vehicle must be equipped with a plainly audible signal trumpet.

plainly audible signal trumpet.

4. (1) Every automobile shall carry, during the period from thirty minutes after sunset to thirty minutes before sunrise, and whenever fog renders it impossible to see a long distance, at least two lighted lamps, showing white lights, visible at least two hundred and fifty feet in the direction towards which said automobile is proceeding, and shall also exhibit one red light, visible in the reverse direction. Upon the fronts of the two aforesaid lamps showing white lights shall be displayed, in such manner as to be plainly visible when such lamps are lighted, the number of the registration certificate issued as in this act provided, the same to be in Arabic numerals not less than one inch in height.

less than one inch in height.

(2) Every motorcycle shall carry, during the period from one hour after sunset to one hour before sunrise, and whenever fog renders it imnossible to see a long distance, at least one lighted lamn, showing a white light visible at least two hundred feet in the direction toward which the motorcycle is proceeding.

5. Automobiles of more than ten horsepower shall be provided with at least two brakes, nowerful in action and separated from each other, of which one brake must act directly on the drive wheels or on the parts of the mechanism which are firmly connected with the wheels. Each of the two brakes must suffice alone to stop the automobile within a proper time. One of the two brakes must be so arranged as to be operated with the foot; provided, however, that on automobiles not exceeding ten horsepower one brake will be sufficient.

Motorcycles shall be provided with at least one

horsepower one brake will be sufficient.

Motoreveles shall be provided with at least one brake, which may be operated by hand.

6. No motor vehicle tire shall be fitted with a chain when used upon gravel, macadam or other made roads, except upon natural dirt, asphalt, cobble. Relgium block or vitrified brick pavements; provided, however, that tires may be fitted with a chain when used upon roads covered with a coating of at least one inch of snow or ice.

7. Every motor vehicle must have devices to prevent excessive noise, annoving smoke and the escape of gas and steam, as well as the falling out of embers or residue from the fuel.

PART III.

Department of Motor Vehicle Registration and Regulation.

Regulation.

8. The Secretary of State shall forthwith organize in connection with the Department of State the deartment of motor vehicle registration and regulation. He shall provide suitable quarters for the same and the shall provide suitable quarters for the same summent of the proper enforcement of the provisions of this act. He shall approve all bills for diabursement of money under any of the provisions of this act, which shall be paid by the State Treasurer, upon the warrant of the Comptroller out of any appropriation of the provisions of the conficio commissioner of motor vehicles, and shall have personal charge and supervision of the confocusion of this act. The Commissioner of Motor Vehicles, who shall be chief clerk of the department of the provisions of this act. The Commissioner of Motor Vehicles, who shall be chief clerk of the department of the provisions of this act. The same the canabilities of all kinds of motor vehicles, and be canable to pass upon the efficiency of motor vehicles and the competency of motor vehicles and the competency of motor vehicles shall also appoint as many inspectors, not containing evidence of violations of this act, in obtaining evidence of violations and otherwise assisting in the enforcement of the act. The said inspectors shall be chosen with especial reference to their fitness for the work, and shall be required to submit themselves to such an examination as the Commissioner of Motor vehicles shall organize the inspector force with the chief inspector as the same and the competence of the department, or for any other cause. He shall fix the compensation of the inspector force with the chief inspector force with the compensation of the subsector force as shall appear desired the providence of the same and the compensation of the subsector force as shall appear desired by the compensation of the subsector force as shall appear desired by the compensation of the comp

proper person to be granted such a license; and the said commissioner shall have power to grant a registration certificate to the owner of any motor vehicle, application for reastration having properly been made and the fee therefor paid, and the vehicle being of a type that complies with the requirements of this act. But it shall be lawful for the said commissioner of motor vehicles to refuse registration to any vehicle that, in his estimation, is not a proper vehicle to be used upon public roads and highways of this State.

12. The commissioner of motor vehicles shall have such power and duties as are in this act given and imposed, and shall collect such data with respect to the proper restrictions to be laid upon motor vehicles, and the use thereof upon the public roads, turnpikes and thoroughfares, as shall seem to be for the public good, and under the direction of the Secretary of State shall report to each Lerislature the operations of his office for the year ending on the next preceding thirty-first day of December. It shall be his duty to attend to the enforcement of the provisions of this act.

13. The commissioner of motor vehicles shall keep a record of all his official acts, and shall preserve copies of all decisions, rules and orders made by him, and shall adopt an official seal. Copies of any paper or papers filed in his office, may be authenticated under said seal, and when so authenticated shall be evidence equally with and in like manner as the originals, and said commissioner sha. be empowered to communicate with the police departments and peace officers in the State for the purpose of and with the object of the roroper enforcement of this act.

14. Motor vehicle inspectors may be appointed, as provided in section nine of this act, and shall be presented with a badge indicative of their office, and when wearing such badge on the left breast of the outermost garment shall have power to stop any motor vehicle and examine the same to see that it complies with the requirements of this act, and sha

PART IV

The Operation of Motor Vehicles.

PART IV.

The Operation of Motor Vehicles.

15. No person shall drive a motor vehicle, the owner of which vehicle shall not have comolied with the provisions of this act concerning the proper registration and identification of the same; nor shall any person drive a motor vehicle which shall display on the front or back thereof a fictitious number, or a number other than that designated for such motor vehicle.

This section shall not apply to the owners or drivers of automobiles licensed pursuant to subdivision three of section sixteen of this act, but such automobiles licensed under said section shall at all times display on the back thereof the registration number of said automobile under the laws of the State in which the business of the owner shall be conducted, as provided in the said section, and no other number shall be required or shall be displayed upon the said automobile.

16. (1) Every resident of this State and every non-resident, whose automobile shall be driven in this State, shall, before using such vehicle on the public highways, register the same, and no motor vehicle shall be driven unless so registered. Every registration shall expire and the certificate thereof become void on the thirty-first of December of each year; provided, it may be lawful for any automobile duvergistered, to operate under said registration certificate. Such registration shall be made in the following manner: A statement in writing shall be made to the Commissioner of Motor Vehicles, or his lawful agent, containing the name and address of such owner, together with a brief description of the character of such automobile, including the name of the maker and the manufacturer's number, and the rated horse-power. The applicant shall pay the Commissioner of Motor Vehicles for each registration in the rated horse-power. The applicant shall pay the Commissioner of three dollars for automobiles of the first class; five dollars for the second class; and ten dollars for the third class. Automobiles of the horse-power or more of th

served on such owner within this State; the service of such process shall be made by teaving a copy of the same in the office of the Secretary of State with a service fee of two dollars to be taxed on the plaintiff's costs of suit. Said Commissioner of Motor Vehicles shall forthwith notify such owner of such service by letter directed to him at the post office address stated in his application. Upon any and every transfer of a registered automobile by the owner thereof, in whose name the same is registered, the said registration and certificate thereof shall forthwith be and become void; but the same may be validated by the endorsement of the Commissioner of Motor Vehicles, the purchaser having made written application therefor and paid a transfer fee of one dollar.

(2) Every resident who is the owner of a motorcycle, and every non-resident whose motorcycle shall be driven in this State, shall pay an annual registration or license fee of two dollars for such motorcycle, which shall include the right of such person to drive such motorcycle within this State without an examination of his ability to run a motorcycle, unless such an examination be required by the Commissioner of Motor Vehicles; and such owner shall be given a registration certificate, in which shall be designated the proper registration number, and such certificate shall expire on the thirty-first of December of each year, unless revoked by the Commissioner of Motor Vehicles, or as otherwise provided by this act.

designated the proper registration number; and such certificate shall expire on the thirty-first of December of each year, unless revoked by the Commissioner of Motor Vehicles, or as otherwise provided by this act.

(3) Every person or corporation regularly engaged in the business of carrying passengers for hire by means of automobiles, which business shall be conducted in a State adjoining the State of New Jersey, and the conduct of which business shall require such automobile to enter the State of New Jersey for said purposes shall make application, which applicant be a corporation, by an officer of the said corporation, and shall specify the number of automobiles which shall be operated in connection with the said business, the type and motive power of each, and the registration number of each under the laws of the adjoining State in which said business shall be connected, the Commissioner of Motor Vehicles shall issue to the said applicant, upon the payment of a fee of one hundred dollars, a registration certificate, which shall have endorsed thereon the type and batter egistration haber of matching the said applicant, upon the payment of a fee of one hundred dollars, a registration certificate, which shall have endorsed thereon the type and batter egistration alone to the said applicant, upon the point of entry in the State; provided, however, that not more than fifteen of the said automobiles to be operated within the State of New Jersey at any one time, and that no automobile shall be included under the provisions of such registration certificate unless the same is duly registered and licensed under the laws of the State in which such business is being conducted.

Perry manufacturer of or dealer in automobiles within this State instead of registerine each business within this State instead of registerine each business is being conducted.

Perry manufacturer of or dealer in automobiles within this State instead of registerine each business is being conducted by the manufacturer or dealer, as the case may

of drivers' licenses. Those authorizing the licensee to drive cars of less than thirty horsepower shall be

of the first class, and those authorizing the licensee to drive cars of thirty and greater horsepower, shall be of the second class. The annual license fee to be charged shall be two dollars for drivers of the first class, and four dollars for drivers of the second class. If an automobile has more than one rating of horsepower, all fees shall be reckoned at the highest rating. Provided, however, that the Commissioner of Motor Vehicles shall, upon the application of any person who or corporation which shall have complied with the provisions of sub-division three of section sixteen of this act, issue to the said person or corporation a sufficient number of special drivers' certificates, which shall have endorsed thereon the registration number under the laws of the adjoining State in which the business of the said applicant included in and covered by any license certificate issued pursuant to said sub-division three of section sixteen of this act, and which, when duly countersigned by a special agent appointed for that purpose by the said Commissioner of Motor Vehicles pursuant to the provisions of section ten of this act, shall authorize and permit the person to whom the same is issued to operate any of the automobiles registered under the laws of such adjoining State, the registration numbers of which shall appear endorsed upon the said certificate, and no others within the State of New Jersey, for a period of not to exceed twenty-four hours at any one time. Such driver shall at all times when operating any of the said vehicles within the State of New Jersey, the part of the said driver and the preceding provisions of this section shall not be applicable to him.

18. Each license to drive an automobile shall specify the maximum horsepower of the automobile allowed to be driven thereunder, and shall, have endorsed thereon in the proper handwriting of the licensee the name of said licensee. And said licensee when thereupon requested by any motor vihicle inspector or magistrate, while in the performance of the dut

e. No intoxicated person shall drive a motor yehicle.

20. No person shall drive a motor vehicle without the consent of the owner.

PART V.

Identification Marks of Motor Vehicles.

Identification Marks of Motor Vehicles.

21. The owner of every automobile which shall be driven on the public highways of this State shall display on the front and rear of such vehicle, not less than fifteen inches or more than thirty-six inches from the ground an identification mark to be furnished by the motor vehicle department; provided that the said motor vehicle department; provided that the said motor vehicle department shall not be required to furnish such identification mark to any motor vehicle already registered, prior to Iune first; and such motor vehicle so registered shall be permitted to display any identification mark lawful at the time of the passage of this act prior to said June first. Said identification mark shall contain the number of the registration certificate of said vehicle in stroke of not less than four inches in height with a stroke of not less than four inches in height with a stroke of such design as shall be prescribed by the Commissioner of Motor Vehicles. On the tag shall be, in smaller characters, the manufacturer's number of the car, certified by the Commissioner of Motor Vehicles. The identification marks of vehicles shall be either of metal or leather, sufficiently enduring to be plainly legible under all atmospheric conditions for at least one year. Motorcycles shall also display such identification marks on the front and side thereof as the Commossioner of Motor Vehicles shall prescribe. All identification marks shall be kept clear and distinct and free from rease, dust, or other blurring matter, so as to be plainly visible at all times during daylight and at night.

PART VI.

Use of Roads and Highways,

Use of Roads and Highways.

22. (1) Drivers of motor vehicles, whether of burthen or of pleasure, using any of the turnpikes or oublic roads in this State, when met by another motor vehicle, or by a carriage, sleigh, or sled, shall keep to the right, and when overtaken by another motor vehicle, carriage, sleigh or sled they shall likewise keep to the right, so as in both cases to permit such motor vehicle, carriage, sleigh or sled, either met or overtaken, to pass uninterrupted.

(2) No owner or purchaser or driver of a motor vehicle who shall have complied with the requirements and provisions of this act shall be required to obtain any other license or permit to use or operate the same, nor shall such owner or purchaser or driver be excluded or prohibited from or limited in the free use thereof, nor limited as to speed upon adypublic street, avenue, road turnpike, driveway, parkway or other public place, at any time, when the same is or may hereafter be opened to the use of perquired to comply with other provisions or conditions as to the use of said motor vehicle, except as in this section contained shall be construed to apply to or include any speedway created and maintained in pursuance of an act of the Legislature of the State of New Iersey entitled "An act to provide for the construction and maintained in pursuance of the Legislature of the State of New Iersey entitled "An act to provide for the construction and maintained in pursuance of speedway created and maintained in pursuance of an act of the Legislature of the State of New Iersey entitled "An act to provide for the construction and maintained in pursuance of speedway created and maintained in pursuance of an act of the Legislature of the State of New Iersey entitled "An act to provide for the construction and maintained in pursuance of an act of the Legislature of the State of the

ties of this State," approved March nineteenth, one thousand nine hundred and two; nor to any parks or parkways created and maintained in accordance with an act of the Legislature of the State of New Jersey entitled "An act to establish public parks in the counties of this State and to provide for the acquirement, improvement and regulation of the same," approved March twentieth, one thousand nine hundred and one. No city, town, township, borough or other municipality shall have power to make any ordinance, by-law or resolution limiting or restricting the use or speed of motor vehicles, and no ordinance, by-law or resolution heretofore or hereafter made by any city, town, township, borough or other municipal or local authority by whatever name known or designated in respect to or limiting the use or speed of motor vehicles shall have any force, effect or validity.

(3) No person shall drive a motor vehicle upon any public street, public highway, public road, public parkway, turnpike or public driveway in this State in a race or on a bet or wager.

(4) Every driver of a motor vehicle, after knowingly causing an accident by collision or otherwise knowingly injuring any person, horse, or vehicle shall forthwith bring his motor vehicle to a full stop return to the scene of accident and give to any proper person demanding the same his name, the number of his driver's license and the registration number of the motor vehicle, and the names and residences of each and every male occupant of said motor vehicle.

PART VII.

Provisions Concerning Safety of Traffic.

PART VII.

Provisions Concerning Safety of Traffic.

residences of each and every male occupant of said motor vehicle.

PART VII.

Provisions Concerning Safety of Traffic.

23. The following rates of speed may be maintained, but shall not be exceeded, upon any public street, public road or turnpike, public park or parkway, or public driveway, or public highway, in this State by anyone driving a motor vehicle.

(1) A speed of one mile in seven minutes upon the sharp curves of a street or highway or when turning a corner, and a speed of one mile in four minutes at the junction or intersection of a prominent cross-road where such a street, road or highway passes through the open country. The term "open country" meaning where houses are an average more than one hundred feet apart.

(2) A speed of one mile in five minutes where such street or highway passes through the built-up portion of a city, town, township, borough or village where the houses are on an average less than one hundred feet of any horse or other beast of draught of our min in four minutes within two hundred feet of any horse or other beast of draught of our drugen upon the same street or highway; provided, however, that such speed not exceeding twenty miles per hour, shall be lawful in the open country as may be necessary in order to pass a vehicle traveling in the same direction, but the speed shall be diminished forthwith if necessary to comply with the provisions of this act.

(4) Elsewhere and except as otherwise provided in subdivisions one, two and three of this section a speed of one mile in three minutes; provided, however, that nothing in this section contained shall permit any person to drive a motor vehicle at any speed greater than is reasonable, having regard to the traffic and use of highways, or so as to endanger the life or limb or to injure the property of any speed of one mile in three minutes; provided, however, that the foregoing provisions concerning the speed of motor vehicles shall not apply to any speedway built and maintained for the exclusive use of motor vehicles of motor v

Proceedings.

Proceedings.

26. (1) A complaint having been made in writing and duly verified, that any person has violated any of the provisions of this act, any magistrate of the county, or recorder or police magistrate of any municipality, in which the offense is committed may, within thirty days after the commission of said offense, issue either a summons or a warrant directed to any constable, police officer, the inspector of motor vehicles or the commissioner of motor vehicles of this State, for the appearance or arrest of the

person so charged; and the magistrate shall state what section or provision of this act has been violated by the defendant, and the time, place and nature of said voletion, and upon the return of said summons or warrant the said magistrate tendine the guilt or innocense of such person, and upon coviction, may impose upon the person so convicted the penalty, by this act prescribed, together with the costs of prosecution for such offense.

(2) Such magistrate, upon receiving complaint in convenient of this act by any corporation, is hereby authorized and required to issue a summons directed to any constable, police officer the inspector of motor vehicles, or the commissioner of motor vehicles, of this State, requiring such corporation to be and manned, to answer to said complaint, which said summons shal be served on the president, vice-president, secretary, superintendent or manager or such corporation, or the agent upon whom other process against it may be served, at least five days before the time of appearance mentioned therein, and thidviduals, except where a different procedure is provided by this act.

27. Any hearing to be held pursuant to this act shall, in the request of the defendant, be adjourned for a period not exceeding thirty days from the restability of the magistrate to detain the defendant in safe custody, unless he shall make a cash deposit or enter into a bond to the State of New State of the said of any arrest without warrant, as the case may be, but in such cash stable be the duty of the magistrate to detain the defendant in safe custody, unless he shall make a surely, to or in an amount not exceeding five hundred dollars, conditioned for his appearance on the large of the said sposed of; and such bond, if forfeited, may be prosecuted by the commissioner of motor well-desi and venture the provisions of section thirty-seven of his act; provided, however, that in lieu of said bond or cash deposit or enter into a bond to the State of New Justice in the provision of section thirty-seven of this

defendant.

30. Proceedings under this act may be instituted on any day of the week, and the institution of such proceedings on Sunday shall be no bar to the successful prosecution of the same; and any process served on Sunday shall be as valid as if served on any other day of the week.

THE MOTOR WORLD

31. All proceedings for the violation of the provisions of this act shall be entitled and shall run in the name of the State of New Jersey, with the commissioner of motor vehicles or a motor vehicle inspector, or a police officer, or a constable, or such other person as shall by complaint institute the proceedings as prosecutor; and any magistrate may, at his discretion, refuse to issue a warrant on the complaint of any person other than the commissioner of motor vehicles or a motor vehicle inspector, until a sufficient bond to secure costs shall have been executed and delivered to the said magistrate.

32. (1) Any constable, or police officer, or motor vehicle inspector or the commissioner of motor vehicles is hereby authorized to arrest without warrant any person violating in the presence of such constable, or police officer or motor vehicle inspector or the commissioner of motor vehicles any of the provisions of this act, and to bring the defendant before any magistrate of the county where such offense is committed. The person so offending shall be detained in the office of the magistrate until the officer making such arrest shall make oath or affirmation, which he shall do forthwith, declaring that the person under arrest has violated one or more of the provisions of this act, and specifying the provision or provisions violated, whereupon said magistrate shall issue a warrant returnable forthwith, and the said magistrate shall proceed summarily to hear or postpone the case as provided in sections twenty-six and twenty-seven of this act.

(2) Any person arrested for a violation of any of the provisions of this act shall, upon demanding of the magistrate hearing the complaint against said person, produce his license for inspection, and if said person shall fail to produce his license, or to give a satisfactory excuse for its non-production, he shall, is addition to any other penalties imposed by said magistrate, be subject to a fine of not more than twenty-five dollars.

satisfactory excuse for its non-production, he shall, in addition to any other penalties imposed by said magistrate, be subject to a fine of not more than twenty-five dollars.

33. A summons or warrant issued by any magistrate in accordance with the provisions of this act shall be valid throughout the State, and any officer who has the power to serve the said summons, or to serve said warrant and make arrests thereon in the county where the same shall have been issued, shall have like power to serve said summons and to serve said warrant and make arrest thereon in any of the several counties of the State. If any person shall be arrested for a violation committed in the county other than that in which the arrest shall take place, the person so arrested may demand to be taken before a magistrate of the county in which the arrest may have been made for the purpose of making a cash deposit or of entering into a recognizance with sufficient surety; whereupon the officer serving the said warrant shall take the person so apprehended before a magistrate of the county in which the arrest shall have been made, who shall thereupon fix a day for the matter to be heard before the magistrate issuing the said warrant, and shall take from the person apprehended a cash deposit or recognizance to the State of New Jersey with sufficient surety or sureties for the appearance of the said person at the time and nlace designated in accordance with the provisions of section twenty-seven of this act; the cash deposit or recognizance so taken shall be returned to the magistrate issuing the warrant, to be retained and disposed of by him as by this act provided.

34. The same fees shall be allowed the magistrate and officers making an arrest or serving a summons in proceedings under this act as are allowed for like services in the small cause court and shall be paid by the defendant if the defendant be found not guilty of the charge or charges laid against him, then the costs shall be repaid to said defendant as hereinbefore provided. If

Punishments and Penalties.

PART IX.

Punishments and Penalties.

35. Any person who shall be convicted of violating the provisions of sections fifteen and twenty-one of this act shall be subject to a fine not exceeding one hundred dollars; in default of the payment of such fine there shall be imposed an imprisonment in the county jail for a period not exceeding ten days; provided, that any offender who shall be convicted of a second offense of the same violation may be fined in double the amount herein prescribed for the first offense, and may in default of the payment thereof, be punished by imprisonment in the county jail for a period not exceeding twenty days; provided, further, that the penalties above prescribed shall not apply to the display of a fictitious number.

Any person convicted of displaying a fictitious number as prohibited by section fifteen, or of violating the provisions of section seventeen, nineteen or twenty of this act, shall be subject to a fine not exceeding five hundred dollars, or to imprisonment in the county jail for a period not exceeding striv days.

Any nerson who shall be convicted of a violation of subdivision four of section twenty-two of this act, shall be subject to a fine not exceeding two hundred and fifty dollars, or to imprisonment in the county jail for a period not exceeding thirty days.

Any person who shall be convicted of a violation of section sixteen of this act shall be subject to a fine not exceeding two hundred and fifty dollars, or to imprisonment in the county jail for a period not exceeding thirty days.

Any person who shall be convicted of a violation of subdivision three of section twenty-two, or of section twenty-two, or of section twenty-three of this act, shall for the first offense be subject to a fine not exceeding one hundred dollars; in default of the payment of such fine there shall be imposed an imprisonment in the county jail for a period not exceeding ten days; provided, that any offender who shall be convicted of a second or any subsequent offense of the same violation may be fined in double the amount herein prescribed for the first offense, or imprisoned in the county jail for a period not exceeding twenty days, and in addition to such penalties the license of said offender shall be revoked; provided further, that nothing herein contained shall prevent a revocation of license for the first offense, or for the violation of any other provision of this act.

Any person who shall be convicted of violating any

Any person who shall be convicted of violating any of the following-named provisions of this act shall be subject to the penalties herein specified:

Of sections three, four or eighteen, a fine not exceeding ten dollars.

Of section six a fine not exceeding fifty dollars.
Of subdivision one of section twenty-two a fine not exceeding twenty-five dollars.

Of section six a fine not exceeding fifty dollars.

Of subdivision one of section twenty-two a fine not exceeding twenty-five dollars.

36. It shall be lawful for a magistrate before whom any hearing under this act shall be had, to revoke the license of any person to drive motor vehicles when such person shall have been guilty of such willful violation of the provisions of this act as shall in the discretion of the said magistrate justify such revocation, but an appeal of the matter to the Court of Common Pleas shall act as a stay upon said revocation, and the Court of Common Pleas upon the appeal of the said matter shall have the power to void the said revocation; and the commissioner of motor vehicles shall at all times have the power to validate a license that has been revoked, or to grant a new license to any person whose license to drive motor vehicles shall have been revoked.

It shall be lawful for the justice of the Supreme Court holding the circuit in each of the counties of this State, upon application made to him by a verified petition for that purpose by any nerson against whom a judgment or sentence for the violation of any of the provisions of this act shall have been rendered, who may desire to have the legality of his conviction reviewed or the reasonableness of the sentence or penalty imposed, to order the said complaint, process, proceedings, evidence and record of conviction to be forthwith brought before him, that the legality of such proceedings and sentence, or judgment, or the reasonableness of the sentence or penalty may be summarily reviewed and determined; and if such proceedings and sentence or judgment shall thereupon be found to be illegal, or the sentence or penalty be unreasonable, forthwith to set aside the same and to order the remission or reduction of any fine and costs that may have been imposed or the discharge of any offender from custody.

PART X.

Miscellaneous

PART X. Miscellaneous.

PART X.

Miscellaneous.

37. Moneys received in accordance with the provisions of this act, whether from fines, penalties, registration fees, license tees, or otherwise, shall be accounted for and forwarded to the Commissioner of Motor Vehicles and by him paid over to the Treasurer of the State of New Jersey, to be appropriated annually to the Commissioner of Public Roads, to be used as a fund for the repair of the improved roads throughout the State, whether they had been originally built by State aid or not, and to be by the said Commissioner, apportioned once each year among the several counties of this State according to the mileage of improved roads in each county, the share apportioned each county to be used for the repair of improved roads in that county under the direction of the Commissioner of Public Roads or his authorized representatives, and to be vaid in the same manner as State funds are now paid for the improvement of public roads. The term : improved roads" as used in this section shall not include streets paved with cobble stones, Belgium block or asphalt.

38. The Commissioner of Public Roads shall be authorized and full power and authority are hereby given to him to have erected at such points throughout the State as to him shall seem necessary, cautionary warnings of dangerous crossings, steep declivities or other irregularities or perils of the roadway, at a cost, however, not to exceed in the aggregate one thousand dollars per annum.

39. When any motor vehicle shall have been deposited under this act in lieu of bond, the said motor vehicle shall be held the property of the State of New Jersey, subject to the same conditions as would govern the bond under like circumstances, and may be redeemed by the person depositing the same upon delivery of the requisite bond or upon paying such fine and subfitting to such penalty as may be imposed; and unless the motor vehicle so deposited in lieu of bond shall be redeemed within ten days next following the date of the final determination of the matt



BLACK LIST POSTED AT FERRIES

Long Island Railroad Bars Automobilists for Violating Rules—Prominent Owners Under the Ban.

Failure to obey the rules of the Long Island Railroad Co. with reference to automobiles entering and leaving the ferryboats that ply across the East river between New York and Long Island City, has resulted in a black list by the company and 11 cars hereafter will be denied transportation over its ferries. The ban has been placed upon these cars because of the failure of the drivers to obey the rule which requires that the motor of a car shall be stopped after the car has been driven upon the ferry boat and shall not be started until the boat is tied fast to the slip. The ambitiousness of some chauffeurs to "crank up" when the boats are in mid-stream, so as to not lose a minute's time when the other side is reached, is what has caused the Long Island Railroad company to assert its rights.

The fact that the company has black-listed 11 automobiles from the use of the ferries became known on Sunday, when users of the ferries were startled by the appearance of a huge blackboard over the entrance at the Long Island City terminal. The big white letters at the top of the blackboard told that "The following automobiles have been refused transportation over these ferries." Below were chalked the numbers of 11 cars, as follows:

"36,335 N. Y., 49,145 N. Y., 49,503 N. Y., 36,328 N. Y., 51,659 N. Y., 50,000 N. Y., 27,247 N. Y., 21,227 N. J., 40,422 N. Y., 36,360 N. Y., and 34,963 N. Y.

That the Long Island Railroad company does not mean to "play favorites" is evident. Among the published list of cars that have been refused transportation are those belonging to William K. Vanderbilt, Jr., William D. Sloane, Morris Untermeyer. and Alden L. McMurtry. The others are: Lawrence Gourlie, Dr. Calvin Thayer Adams, Night Setrive Co., Lozier Motor Co., Frederick H. Tucker, Jr., H. A. Pharmson, and Thomas A. Smith.

Below the blackboard flared a big sign which read:

AUTOMOBILES!

MOTOR MUST BE STOPPED

IMMEDIATELY AFTER
BEING LOCATED ON FERRYBOATS, AND MUST NOT BE
STARTED AGAIN UNTIL BOAT IS
FAST IN SLIP.
FAILURE TO OBSERVE
THIS RULE WILL RESULT IN
REFUSAL OF TRANSPORTATION
ON FERRIES.
LONG ISLAND R. R.

That the action taken by the Long Isl-

and Railroad Co. is not without reason cannot be denied. Though not of frequent occurrence, there have been accidents resulting from starting motors before the boats are made fast to the slip, and it is to guard against a recurrence of this that the company has found it necessary to stand upon its rights, so to speak.

In explanation of the action taken by the railroad company, President Ralph C. Peters caused this statement to be issued:

"We have been forced to take this step in the interest of public safety. Years ago a law was enacted by Congress prohibiting motor vehicles from entering upon ferries under their own power. Later that measure was changed so that vehicles driven by their own power could be propelled aboard ferries and similar boats under that power. Until that amendment was enacted they had to be pushed on board by hand. The law, however, requires that motors must be stopped immediately the vehicle is located and not started until the ferry is fast in its slip again after the trip. Chauffeurs have proved obstinate and refused to obey that law, preferring to let their engines chug away. We do not intend to stand for that any longer.

"Last fall a car on which the engine had not been stopped suddenly shot ahead and knocked three or four persons into the river. Again, there is more danger of an explosion when motors are running. Such an explosion might set fire to the ferry and cause a great loss of life. We don't wish to interfere with traffic or to put any one to inconvenience, but the law must be respected. Everybody will be treated exactly alike, but we intend to break up the practice of automobilists not stopping motors once they have their cars on board and of starting them before ferries are in the slips again."

Buffalo Enforcing "Drip Pan Ordinance."

Enforcement of the new "drip pan ordinance" began in Buffalo on Monday, 4th inst. The first offenders charged with neglecting to provide their automobiles with pans to prevent oil from dripping on the pavements got off with light penalties. There were four of them arraigned before Judge Hodson, in the Municipal Court, and all pleaded guilty, but averred in extensation of their offense that they had ordered pans which had not been delivered at the time. The court mulcted each defendant only the amount of costs, \$1.50 for each, but intimated that the cases would not constitute precedents.

Bullets for the Tires of Scorchers.

Chief of Police Metzger, of Indianapolis, is on the war path. He has instructed Motorcycle Patrolman Gibney to use his revolver on the tires of any automobiles whose drivers refuse to stop when ordered. Metzger has announced that he will make every effort to have second offenders fined the limit of \$200 and costs.

SIGNS THAT "GO BY CONTRARIES"

Some in Somerville that Don't Say What They Mean, nor Mean What They Say.

· Somerville is one of several cities, considerable in size, that cluster around Boston, constituting the fellies of the big metropolitan "wheel" of which Boston is the "Hub." It has many miles of good streets, with such a variety of stiff hills and long level stretches as to lead speed loving motorists into temptation. Among its residents is C. A. Kenniston, who has a storehouse at 174 Walnut street. In front of it he has a huge sign that motorists cannot fail to see, no matter how fast they may be moting from the Mystic boulevard across Broadway and up the Walnut street hill, one of the stiffest in the city, by the way, and a good one for the climber. The sign bears the legend:

AUTO RACING
EVERY DAY
RIGHT BY HERE
MILE
A MINNIT
GRAND OLD STAND

"People here in America, and especially automobilists, do just the opposite of what they are told," Kenniston explained to a curious caller, who had noticed the size of the sign and the excellent work in the big black lettering. "They don't mind the signs on the boulevard telling them the speed limit is 15 miles an hour. They go by here a mile a m-i-n-u-t-e-, not a 'minnit' as my sign says. And, by gosh, that's dangerous.

"With all the automobilists here, it's getting as bad as down Maine. I don't dare let my daughter go out driving alone. Down Maine the farmers don't dare let their wives and daughters go down to the village store alone for fear of these automobilists; why, with their big goggle lamps they'd scare any one to death on a dark night."

And so Mr. Kenniston puts up a sign telling of the beauties of his place of business as a grandstand for witnessing the automobile racing. He hopes the drivers will do just the opposite of what the sign suggests.

Kenniston is a believer in signs. He has them all around his storehouse and yard. The most of them warn people to do just what Kenniston doesn't want them to do.

One of Kenniston's signs, for example, reads:

"Hit it and pull it down, as Samson did the temple."

Despite the fact that every driver of a wagon sees the sign in large letters, the pillar on which the suggestion is thus plainly set forth has not been hit once, even softly.



Note the straight-line Body—the hall-mark of Quality.

MATHEMATICALLY EXACT

The Oakland car, in its completeness, in an assemblage of parts, every one of which has been studied and worked out in detail, the result being a matter of mathematical certainty.

There were no theories to advance, no experiments to be proved. Engineering skill and extended automobile experience were united to produce the simplest, most efficient and economical motor car possible. Price was not considered, for elimination of costly complexity and a proper understanding of the object in mind regulated that consideration.

Maximum of Power; Minimum of Parts

The Oakland car was designed to realize to the fullest extent the possibilities of the gasolene motor in its simplest and most economical form. This includes first cost, cost of maintenance, operation and long life. We honestly believe the Oakland will stand more hard, legitimate abuse with less attention than any other automobile, regardless of price.

Simplicity of Construction

The power plant is a two-cylinder vertical engine, perfectly balanced, absolutely free from vibration, water cooled by the thermo-syphon, or gravity system (doing away with all gears, pumps, etc.), a transmission that the planetary system ought to be, but isn't, shaft drive with all bearings of more generous surface than provided for in most larger cars, and delivers TWENTY HORSEPOWER AT THE DRIVING WHEELS. Lubrication is positive and unfailing. Engine design insures perfect ignition. Carburetion is constant at all speeds. Semi-elliptic front and full elliptic rear springs provide luxurious riding qualities.

The Oakland is making friends by "making good."

Runabout, \$1300 Tourabout, \$1350 Touring Car, \$1350

Oakland agents are already making money. Would you be one of them? Act NOW.

OAKLAND MOTOR CAR CO., Pontiac, Mich.



THERMOID Brake Lining

POSITIVELY WILL NOT BURN-GRIPS INSTANTLY-LASTS INDEFINITELY

Write for Particulars

TRENTON RUBBER MFG. CO.,

2900 State Street, TRENTON, N. J.



The Proof of the Pudding is in the Eating

COMMON SENSE PLUC. PRICE \$1.25

It is very easy for you to prove whether the claims for excellence of SPLITDORF IGNITION APPARATUS are real or whether they are mere talk.

Just give it a fair trial on your car—that's all.
You will soon discover an absence of ignition troubles and a reliability and efficiency that will make you its friend.

C. F. SPLITDORF, Walton Ave. & 138th St., NEW YORK



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

STRONG-DURABLE CALELESS—RUSTLESS MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO



EMPIRE AUTOMOBILE TIRE COMPANY,

TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 20 La Salle St.; Atlanta, Ga, Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo.; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.

The Week's Patents.

12,754. Reissue. Tire Cover. William A. Allen, New York, N. Y. Filed Jan. 17, 1908. Serial No. 411,375. Original No. 828,701, dated Aug. 14, 1906, Serial No. 298,880.

1. A covering for vehicle tires, constructed of a weather proof material consisting of connected substantially parallel strips, one for the inner face of the tire, one for each of the side faces of the same, one for the tread, and a flap connected with the inner facing strip, and adapted for lapping engagement with one of the side strips, one only of the parts thus lapped being transversely divided, and one portion of the flap being arranged to extend beneath said side strip and the other portion outside said side strip, and means for securing the flap to the side strip with which it engages.

880,526. Vehicle. Henry S. Hele-Shaw, London, England. Filed June 27, 1907. Serial No. 381,161.

1. The combination with a vehicle or transporter of a carrier rotatable in a "horizontal plane," feet supported by said carrier and movable relatively to the carrier to engage the ground and to raise them clear of the ground.

880,587. Apparatus for Manufacturing Pneumatic Tires. Thomas Sloper, Devizes, England. Filed June 27, 1907. Serial No. 381,164.

1. In a "former" employed in building up a tire fabric, means for holding a plurality of anchoring devices for the fabric, in such a manner that they may be released from the "former" without disturbing their relation to the fabric, substantially as set forth.

880,664. Friction Clutch. William J. Hilliard, Elmira, N. Y. Filed Jan. 15, 1907. Serial No. 352,418.

1. The combination in a friction clutch, of a clutch member, a friction surface thereon, a longitudinally movable section on said second clutch member, a friction surface thereon, screw mechanism for moving said sections of the second member toward and away from the friction surface on the first named clutch member, and a sleeve rotatable with the shaft and non-rotatable with relation to the screw mechanism for operating said screw mechanism, substantially as set forth.

880,704. Gas Engine. Marshall L. Wood, Montpelier, Vt. Filed Feb. 5, 1907. Serial No. 355,782.

1. In an internal combustion or explosive engine, the combination of a plurality of cylinders, and a piston in each cylinder which supplies the fuel-charge to another of said cylinders, said piston having a hollow interior in which the fuel-charge is received and compressed.

880,732. Driving Mechanism. Edmund R. Halsey. South Orange, N. J. Filed Feb. 16, 1907. Serial No. 357,702.

16, 1907. Serial No. 357,702.

1. In a friction drive, the combination, with an axle which is to be driven, of a friction device connected with said axle, a driving shaft, a transmission shaft operated from said driving shaft, a friction disc at the opposite end of the transmission shaft, and means for producing a longitudinal reciprocatory movement of the transmission shaft to bring the friction disc of said shaft in engagement with the friction device of the axle, and mechanism for producing a lateral reciprocatory movement of the transmission shaft, comprising a channeled truss or guide bar, a slide upon said bar, a bearing on said slide in which said trans-

mission shaft is revolubly arranged, and means for moving said slide back and forth upon said guide bar, substantially as and for the purposes set forth.

880,739. Automobile. Manander M. Johnson, Clay Center, Neb. Filed Nov. 30, 1907. Serial No. 404,603.

1. In automobile construction the combination of running gear, an air receiver supported thereon and having an open end arranged toward the front end of the machine, a motor, means for conveying air from the air receiver to different parts of the motor, and means for variably controling the relative quantities of air passing to said parts.

880,759. Motor Vehicle. George G. Schroeder, Washington, D. C., assignor to Farm Motor Company a Corporation of South Dakota. Filed June 20, 1906. Serial No. 322,563.

1. A motor vehicle comprising a body provided with traction wheels, an independent drive shaft for each wheel, gearing for imparting forward and reverse rotations to each drive shaft and each adapted to independently connect its respective shaft with either of its respective gearings.

880,815. Stored Pressure Motor Starting Device. Edward P. Noyes, Winchester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Dec. 28, 1906. Serial No. 349.822.

1. In a compound motor system, the combination of a high presure internal combustion prime motor adapted to drive the external load indirectly through the medium of exhaust pressure fluid, an independently running low pressure engine operated by the pressure of the exhaust from said prime motor, means for storing the pressure fluid suplied by said prime motor and for admitting it to the low pressure engine, and means for temporarily connecting the low pressure engine to drive the prime motor.

880,856. Reversible and Variable Speed Power Transmitting Device. Joseph Bartosik and Peter Krummel, Pittsburg, Pa. Filed May 17, 1906. Serial No. 317,283.

1. In combination aligning shafts, discs on the adjacent ends of the shafts, the opposed faces of the discs being conical, a drive shaft passing between the discs, friction rolls on the drive shaft movable on the shaft, a frame movable on each of the rolls, a bar secured to each frame and slidable through the remaining frame, and means engaging the bars to impart movement thereto.

880,884. Spring for Vehicles. Leverett C. Haynes, Boston, Mass. Filed Oct. 3, 1906. Serial No. 337,308.

STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Workmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model \$40. American \$25. Guaranteed Absolutely for Five Years. STEWART & CLARK MFG. CO., 509 Diversey Boulevard, Chicago, U. S. A.

AJAX WRAPPED TIRES

Guaranteed for 5,000 Miles Riding Write for copy of Guarantee

AJAX-GRIEB RUBBER CO.
General Office, 57th St.& Broadway, New York
AGENTS IN ALL LARGE CITIES

WANTS AND FOR SALE

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

FOR SALE—Or exchange for touring car body, one 1907 Buick M. G. body complete. E. KEELER CO., Williamsport, Pa.

FOR SALE—1907 Pullman runabout or surrey, detachable rear seat, 4 cylinder, 30-35 H. P.; victoria top; Sprague's folding front. Five gas lamps and generator. All metal parts nickel plated. Tires, Goodrich, Bailey tread. Tires and car good as new; car run 900 miles. Reason for selling, have ordered new 6-cyl. Pullman. Car cost new \$3.000; price, \$1,250. Address Post Box 448, Harrisburg, Pa.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

FOR SALE—One new 1907 M. G. Buick runabout body complete. E. KEELER CO., Williamsport, Pa.



Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed One Year

WITHERBEE IGNITER CO.,

1876 Broadway, New York





Springs for vehicles, comprising an elliptical spring attached to the body of the vehicle and to the axle; an axle bar attached to the axle; extension springs attached to said axle bar and extending downward to, and attached at their lower ends to the lower ends of rods, and said rods which extend upward through the said extension springs and through the said axle bar to the stop bar; and the said stop bar; toggles constructed to connect said stop bar to the body of the vehicle; closed springs attached to the said stop bar and extending downward through the said axle bar and the said extension springs and rigidly attached to the lower ends of the said rods and said extension springs substantially as and for the purpose set forth.

880,923. Non-Puncturable Inner Tire.

Baldwin F. Schirmer, Indianapolis, Ind. Filed Nov. 6, 1905. Serial No. 286-025.

1. The combination with the rim and tubular tire, of an anular chamber adjacent to the rim, a series of cylinders housed within the tubular tire and communicating with said chamber, a piston in each chamber, and a shoe pivoted upon each piston and adapted to engage the inner surface of the tubular tire, substantially as described.

880,953. Traction Vehicle. Robert E. Zager, Branscombe, Cal. Filed May 10, 1907. Serial No. 372,894.

1. In a traction vehicle, a main frame, a king pin revolubly connected thereto, a truck frame swiveled on said king pin and supporting said main frame, traction wheels journaled to said truck frame and having

swiveled connection therewith, means for swiveling said wheels with respect to said truck frame, a prime mover on said main frame, a power shaft journaled in said main frame and adapted to be driven by said prime mover; transmission mechanism connected with said power shaft for driving said king pin, means for starting, stopping and reversing the rotation of said king pin to said traction wheels.

881,008. Truck. Sargeant P. Knut, Washington, D. C. Filed Sept. 4, 1907. Serial No. 391,283.

1. The combination, with a motor car having tires, of a vehicle arranged to receive said car and provided with propelling means, and means independent of the motor car tires to gear the motor to the propelling means.



New and Absolutely Fireproof.

Hotel Tuller

Adams Ave. & Park St.
DETROIT, MICH.

AUTOMOBILE
HEADQUARTERS

In center of Theatre, Shopping
and Business district.
Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
A la Carte Cafe Grill Rooms
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.
L. W. TULLER Prop.
M. A. SHAW, Mgr.

Exclusive Features of Solar Lamps

(2) Interchangeable Parts



A most important point for the owner or user to consider in purchasing a motor lamp is the matter of interchangeable parts. The entire construction of Solar Lamps by tools and jigs assure the user absolutely of interchangeable parts. In the event of accident the matter of repair is greatly simplified, and naturally less expensive than complete replacement, which is often necessary when the lamp parts are not interchangeable.

This important detail and all others explained fully in our new 1908 catalog. Write for copy.

Badger Brass Manufacturing Company
Two factories

KENOSHA, WIS.

436 Eleventh Avenue, NEW YORK

IF YOU ARE INTERESTED IN MOTORCYCLES The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

\$2.00 Per Year

Specimen Copies

RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



HEINZE ELECTRIC CO., Lowell, Mass.

Packard Enameled IGNITION CABLE

Is Always of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF. Samples and Prices on Request.

THE PACKARD ELECTRIC CO., - Warren, Ohio

AUTOMOBILE BODIES

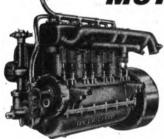


Large Contracts for entire outputs. Specially equipped for Limousine and all other high-class enclosed work. Output for this season, 9,000 jobs, complete, trimmed and finished

NE NOVELTY MFQ. COMPANY

Racine, Wis.

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909 4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.



A NEW SENSATION

Equip your car with

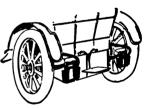
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will still be with you, but you won't know it. Our new booklet is yery interesting and is

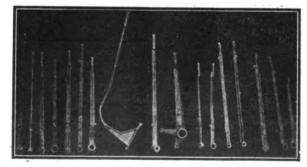
very interesting, and is yours for the asking.

Supplementary Spiral Spring Co. 4555 Delmar Ave., St. Louis

New York Branch Removed to New York Mater Mart Bldg.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM GRAMP & SONS SHIP & ENGINE BUILDING COMPANY. - Philadelphia, Ponna. Philadelphia, Penna. BUILDING COMPANY,



PULLMAN

4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia

to Savannah, Ga., March 5th to 18th,

through mud up to the radiator, beat-

YORK MOTOR CAR CO.,

York, Pa.

1908 Model D. 50 H. P.
Net/ factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMPANY,
Broadway, cor. 56th St.
New York.

LOGAN

1-All transmission gears and dif-

For other features write for catalog to THE LOGAN CONSTRUCTION COMPANY, Chilhoethe, O.

Name Plates and Stampings SPRINGFIELD. MASS.

THE CHANDLER

ferentials of Krupp's chrome

CO.

ing all previous records.

Exclusive

nickle steel.

THE MOTOR WORLD

THOMAS This is the

America's Champion in the New York-Paris Race Send for man and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y. Member A. L. A. M.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO., Anderson, Ind.

Better Because Regular

An Oberdorfer Pump never "sticks." It works day in and day out in a uniform manner. Is yours an Oberdorfer?

M. L. Oberdorfer Brass Co., Water St.. Syracuse, N. Y.

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

McKim COPPER-ASBESTOS GASKETS

McCORD & COMPANY NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.

Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order,
If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

LAVALETTE & CO. 80% of Magnetos used in 6-cylinder cars are EISEMANN High-Tension MAGNETOS 112 West 424 Street. NEW YORK

TRUFFAULT-HARTFORD

Trade
SHOCK ABSORBER
Mark

The Device that made Safe, Speedy and Comfortable Automobiling Possible.

Write for Rough Road Booklet to Department 1.

HARTFORD SUSPENSION CO.,

66 Vestry St., New York

THE "AURORA"

Boston Branch Motor Mart Bidg.

New York

87 Church St.

Carford Motor

Car Co.

Runabout \$775-20 H. P. Commercial Wagon \$1000-20 H. P.

CHAS. F. KELLOM & CO., Philadelphia, Pa.

Live proposition to agents.

AURORA MOTOR WORKS. Aurora. Ill.



"CONTINENTAL" MOTORS ARE STANDARD

Get our quotations on high grade two and four cylinder motors, 10 to 45 horsepower. They are equipped with self-contained oiling system and ready for attaching magneto. Highest grade workmanship, efficient, durable and simple. Also clutches and trans-Send for catalogue.

CONTINENTAL MOTOR MFB. CO., Muskegen, Mich. K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akren, Ohio

FRICTION DRIVEN

The car which has no clutch to slipno gears to strip-no grease-no noise.

THE \$1350 CARTERCAR

The Motorcar Company, Detroit, Mich.

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name.

Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



THIS "GOTHAM STA-RITE"

is equal to anv \$1.50 plug. Has big air chamber, protected porcelain, bronze non-sticking bushing, won't leak,—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price—\$1.00.

THE R. E. HARDY & CO., 86 Watta Street, New York City

THE METEOR 📆.

The Car that does things

For Particulars,

METEOR MOTOR CAR CO., Bettendorf, la.



E. V. Hartford, Pres.

Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts

COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.



Dealers can make quick sales with this machine. The upkeep is very light; has solid rubber tires; goes through deep mud and sand, and climbs steep hills. Double cylinder, air cooled, 10-12 H. P. It's your loss if you don't get the agency. Write,

W. H. KIBLINGER CO.

Box 250.

AUBURN, IND.

Policy Apperson

"QUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

SINGLE CYLINDER CADILLAC showing actual cost of maintaining their cara. It also contains much advice of value to the automobile buyer. Ask for free copy of Booklet No. 6.

CADILLAC MOTOR CAR COMPANY, Detroit, Mich. Member Assn. Licensed Auto. Mfrs.



THE DE 18 RIGHT X

outweer an auto, and it will Send for Booklet

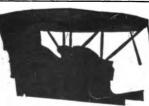
ex Speed Indicator Co. MINNBAPOLIS, MINN.

ontinem Ready-Flated Tires.

They reduce tire expense CONTINENTAL CAOUTCHOUC COMPANY

1788-1790 Broadway, cor. 58th St. New York City. "Keep your eye on Continentals"

SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies SPRINGFIELD METAL BODY CO., 366 Birnie Ave., Springfield, Mass.





A.O.SMITH CO.

High-Grade Axles



Pressed Steel Frames

Stoering Columns Steel Stampings of All Kinds

Transmissions

Send Prints for Estimates

248 Clinton Street.

MILWAUKEE. WIS.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep-No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,00. JACKSON AUTOMOBILE CO... Jackson, Mich.

Bodies Repaired, Trimmed and Painted.
Chassis Repair Department.
J. M. QUINBY & CO.
Automobile Body Builders.
Newark, N. J.

Motor Car Accessories

Spark Pluga, Cable, Switches, Lempa,
Horna, Goggles, Auto Clothing; and
Wet Weather Equipment of our own manufacture.

New illustrated catalogue free

THE AUTOMOBILE EQUIPMENT CO. 256 Jefferson Ave., Detroit, Mich.

WE WILL NOT

accept your contract unless we can give you tedivery you require. We will not accept me contracts than we can fill with proper attention each. We make Pressed Steel Frames and Aumobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.



For catalogues, addre THE CONTINENTAL AUTO MFG. CO.

Bastern Inquiries
Garford Motor Car Co.
of New York
1546 Broadway,
New York City. Western Inquiries srierd Motor Car Co. of Cleveland 1372 East 12th St., Cleveland. 1372

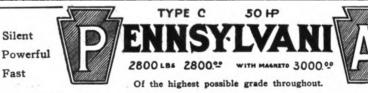
INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS. TOPEKA, KANSAS

To Owners of Cars Costing Over \$1800

Add the nest, snappy little Brush \$500 Runabout to your stable. Will save its cost in depreciation, three, etc., in one season and is just as good for 75 per cent. of your work.
BRUSH RUNABOUT COMPANY, Detroit



PENNSYLVANIA AUTO MOTOR CO.,

Bryn Mawr, Pa.

hne

Luxurious

Completely

Appointed

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street. New York

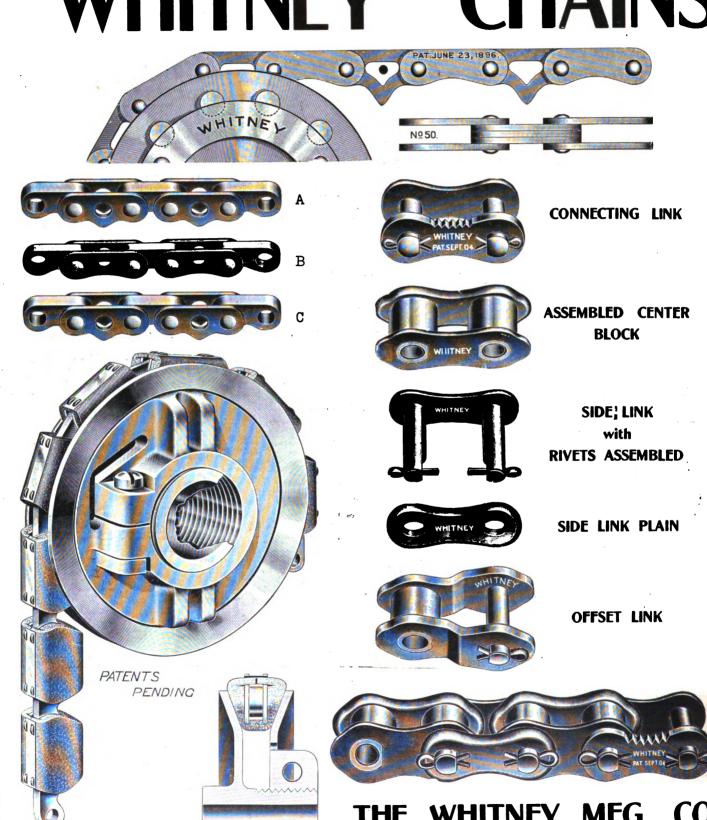
Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of

Name

Address

"WHITNEY" CHAINS



New "Whitney" CHAIN BELT and Adjustable Pulley

WHITNEY MFG. CO.

HARTFORD, CONN.

WHITE WINS

Double Victory in Harrisburg Endurance Run

A 30 horse-power White Steamer was the only touring car to make a perfect score in the 32_J-mile endurance run of the Motor Club of Harrisburg, held May 4 and 5. The White was awarded the principal trophy, the Board of Trade Cup, and also the *Patriot* Cup for which four cars, including the White, tied in last year's contest. Three of last year's successful drivers competed with the same makes of cars in this year's contest and their relative performances decided the award of the 1907 trophy, the White, of course, being the winner.

The contest was run over the rough and hilly roads of eastern Pennsylvania. A 20-mile-an-hour schedule prevailed, with checking stations at intervals of approximately 30 miles. Each car carried an observer, and, in addition, all working parts were sealed. At the conclusion of the run the cars were critically examined by a committee of well known experts.

That the single White entry should have made the only perfect score in the touring car division is significant of the superior reliability and strength of construction of the White. The results of the Harrisburg contest, it should be further pointed out, were the same as in the memorable contest of the Quaker City Motor Club on January 1, 2 and 5, and in last year's struggle for the Hower Trophy, in that the single White entry proved triumphant over a large number of the leading gasolene cars.

NEW SAN FRANCISCO-LOS ANGELES RECORD

A 30 horse-power White Steamer set up a new record from San Francisco to Los Angeles on April 28, 1908, covering the 478-mile mountainous journey in 17 hours and 17 minutes, thus cutting 56 minutes from the former record which had stood for nearly two years.

PERFECT SCORE IN DETROIT ENDURANCE RUN

The single White Steamer entered in the three-day, 419-mile endurance run of the Detroit Dealers' Association, held on April 29-30 and May 1, made the usual White performance—a perfect score.

PERFECT SCORE IN BALTIMORE "SEALED MECHANISM" CONTEST

The single White Steamer entered in the 147-mile "sealed mechanism" contest of the Automobile Club of Maryland, held May 2, made the usual White performance—a perfect score.

Call and see the car in a class by itself

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1460 Market St.

Philadelphia, 629-33 N. Broad St. Boston, 320 Newbury St. Chicago, 240 Michigan Ave.

Cleveland, 407 Rockwell Ave. Pittsburg, 138-148 Beatty Street.

Here's a Record Breaker!

DURING the months of January, February, March and April, 1908, one dealer in the middle west sold Rambler automobiles to the value of \$127,325.93.

There is a big opportunity for substantial business men to add greatly to the volume of their business by selling Rambler automobiles.

More business of all kinds is being done in the middle and southwest to-day than in any other section.

Right now St. Louis, perhaps the choicest location of all, is open for the sale of Rambler automobiles.

The Rambler sales agency proposition is reciprocal and is bound to interest any wideawake business man.

Write for particulars now.

Thomas B. Jeffery & Company Main Office and Factory: KENOSHA, WISCONSIN



Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sta.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore, H. L. Keats Auto Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

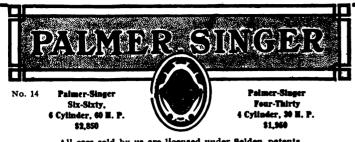
Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.







All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Palmer Singer Fenr-Forty Seven-Passenger Touring 40 H. P. \$4,000



Singer Town Country 18-30 H. P. \$3,000

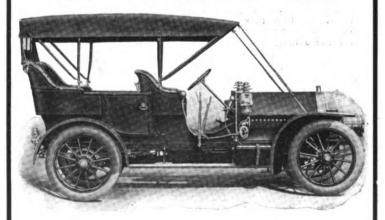
nd Singer Six-Fifty Racing C 6 Cylinders, 50 H.P. \$2,450

The Six-Fifty is a gentleman's racing carthe fastest thing on the road—the snappiest thing on the market. It has all the appearance, the speed, the endurance of a Vanderbitt Cup racer and will be tremendously popular.

Metropolitan Distributors the SELDEN Palmer & Singer Mfg. Co.



THE "JEWEL 4 THE "NON-SKIDDING"



Compare following specifications with other cars at \$3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY Massillon, Ohio, U. S. A.

Clear The Road



The Gabriel Horn warns without frightening—its clear, far-reaching musical tone can be heard half a mile away.

Operated by foot-lever-no bulbs or reeds to get out of order.

The King of Road Clearers

attached to cars owned by

H. M. Emperor of Germany...... 8. horns H. M. King of England......12 horns H. M. Czar of Russia..... 3 horns H. M. King of Spain..... 4 horns

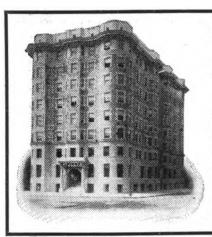
The Gabriel Horn, Cut-Out Valve and Shock Absorbers can be attached to any make or model of car.



Write to-day for booklet and

Gabriel Horn Mfg. Co..

1417 East 40th St. CLEVELAND, O.



New and Absolutely Fireproof.

Hotel Tuller

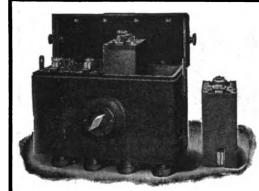
Adams Ave. & Park St. **DETROIT, MICH.**

AUTOMOBILE **HEADQUARTERS**

In center of Theatre, Shopping and Business district.

Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
A la Carte Cafe
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.

L. W. TULLER Prop. M. A. SHAW, Mgr.



HEINZE

1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

Packard Enameled IGNITION CABLE

Is Aiways of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product. MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF. Samples and Prices on Requests

THE PACKARD ELECTRIC CO., - Warren, Ohio

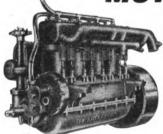


For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

TRONG—DURABLE CALELESS—RUSTLESS MOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY. CANTON, OHIO

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909

4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

Logansport, Ind. THE WESTERN MOTOR CO.,

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.



NEW SENSATION

Equip your car with

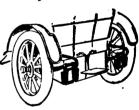
Supplementary Spiral Springs

and notice the difference. No jolts, no jars, no broken springs, or dislocated joints. The "Thank-ye-marms" will

still be with you, but you won't know it. Our new booklet is very interesting, and is yours for the asking.

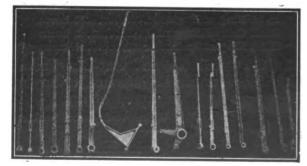
Supplementary Spiral Spring Co. 4555 Deimar Ave., St. Louis

New York Branch oved to New York Motor Mart Bidg.



NODEL

PARSONS' MANGANESE BRONZE LEVER CASTINGS



Solo Makers THE WILLIAM CRAMP & SONS SHIP A BUILDING COMPANY, Philadelphia, Ponna.



Our new 1908 Catalog **Auto Tools** and

Forgings mailed gladly. Write for

it now. BILLINGS & SPENCER CO.

HARTFORD, CONN.

Large Sales

make it possible for us to import THE CELEBRATED BRAMPTON CHAINS from ENGLAND (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers,

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like THE CELEBRATED BRAMPTON CHAIN because some of the other chain makers began to copy the design and shape of the BRAMPTON CHAIN links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the BRAMPTON CHAIN than ever before. These chains somewhat resemble the BRAMPTON in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the BRAMPTON MOTOR CHAIN in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the BRAMP-TON FILLS THE BILL, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

Your 1908 Car

You can have the new car that you order fitted with the CELEBRATED BRAMPTON CHAIN if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for BRAMPTON CHAINS, and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches: leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller lack \$3.50 each. We guarantee the Jack, \$3.50 each.

CHAS. E. M

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street. New York

Branches: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824Main St., Buffalo. 227 1/2-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

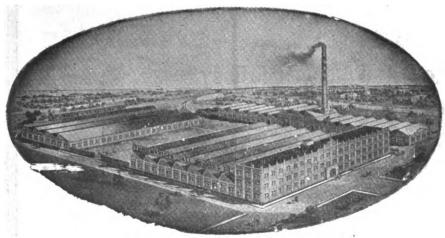


EMPIRE AUTOMOBILE TIRE COMPANY.

TRENTON. N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.





The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park
CLEVELAND, OHIO, U.S. A

AUTOMOBILE INSTRUCTION

Invaluable to the owner or prospective owner of a motor car. Practical and to the point. Send for prospectus to the

Correspondence School of Motor Car Practice Tarrytown, N. Y.

FRANKLIN Automobiles

The cost of a motor car is different from the price. Write for catalogue which explains Franklin high-power at low cost.

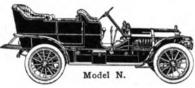
H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Vorkmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model \$40. Guaranteed Absolutely for Pive Years. STEWART & CLARK MPG. CO., 509 Diversey Boulevard, Chicago, U. S. A.

Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.



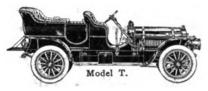
Model K 4 cyl., 4% x 5 \$3.500

Model N — 4 eyl., 5 x 5 \$3.700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x4¾ \$4,200

Medel T — 6 cyl., 515 \$5.000



Write for particulars and our Booklet "What Owners Say
About Their Nationals."

National Motor Vehicle Co.

1007 E. 22d Street INDIANAPOLIS, IND.

The Auto-Meter-

-Is Believed

Every big motor event that has taken place in the past three or four years has seen more Auto-Meters in evidence than all other makes of speed indicators combined.

In the Glidden Tours the number of Auto-Meters used by contestants doubled and tripled all other makes put to-gether.

In the New York-Paris Race the only speed indicator is a Warner on the Thomas car.

Nearly all the automobile manufacturers of the country use the Warner to test out their

cars before they leave the factory.

Two of the most successful makers are including the Warner as

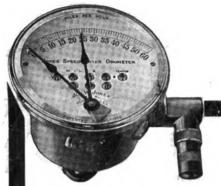
part of their regular equipment.

Aren't these facts father significant—don't they mean anything to

Send for our new book, "The Final Truth About Speed Indica-

Warner Instrument Co.

184 Wheeler Ave., Beloit, Wis



The JONES Speedometer

does not have to be sold with a written guarantee. The fact that a speed indicator bears the name "Jones" is a sufficient guarantee of its accuracy and efficiency. The "Jones" does not have to be "demonstrated" or placed on thirty day trial. It is sold ON ITS MERITS -and on its reputation as the the best speed indicator built -nothing else. It is backed by eight years of actual performance, eight years of constant accuracy, eight years of unfailing reliability.

No broken shafts with the "Jones." The new Lower Bevel Gear Section eliminates all possibility of shaft trouble.

JONES SPEEDOMETER

76th Street and Broadway New York

BOSTON 109 Massachusetts Avenue. PHILADELPHIA 259 North Broad Street CHICAGO
1421 Michigan Avenue.
CLEVELAND



Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any \$4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., \$1900

Write today for special circular aescribing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

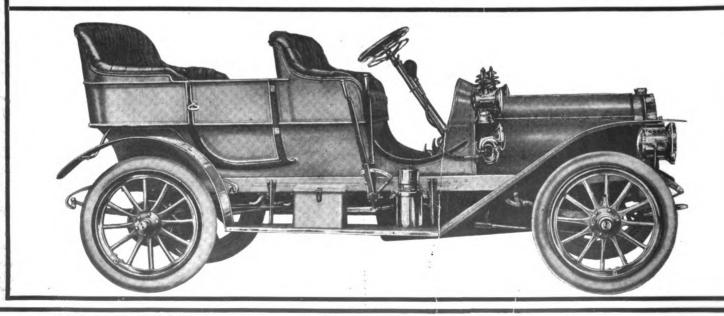
Chicago

Milwaukee

Roston

BRANCHES AND DISTRIBUTING AGENTS Philadelphia

San Francisco



Volume XVIII.

New York, U.S. A., Thursday, May 14, 1908.

No. 7

CHICAGO MAY HAVE TWO SHOWS

Proposition for "Independent" Exhibition
Interests Local Automobile Club—
Two Locations Available.

Chicago is in a fair way to have two shows instead of one next winter. General Manager Alfred Reeves of the A. M. C. M. A., made overtures to the Chicago Automobile Club in regard to the matter of an "independent" show and the board of managers officially responded, by letter dated May 8, to the effect that "Barkis is willin" to receive further advances. Simultaneously, men in Chicago who are interested in the direction of giving the Windy City a show that will appeal to others than the Selden group of makers began to hunt for a suitable building for the show, keeping always in mind the adaptability of the Dexter Park Pavilion at the stockyards. They have discovered that the new Seventh Regiment armory on Wentworth avenue near Thirtythird street is an ideal structure for the show and doubtless will try to get an option on the building for the latter part of next January.

The regiment's new home is well under way and will be completed in plenty of time for the automobile show. It is admirably located and easily accessible by electric cars, the elevated railroad and the steam roads. There will be two large drill floors that will not only facilitate the aesthetic installation of machines, but afford a wide scope for decorative effect.

Sternbergh Wins on Appeal.

After sustaining two defeats, Herbert M. Sternbergh, formerly president of the Duryea Power Co., Reading, Pa., finally has obtained a reversal of judgment in the hard fought case which followed the appointment of a receiver for that company. When the company reached the bankruptey court, Sternbergh presented claims for \$14,000 for money advanced and sought to vote his

claims in the election of a trustee. In opposition it was contended that Sternbergh was really a debtor to the extent of \$25,000 for unpaid stock subscriptions, and therefore was not entitled to a vote. The referee sustained this argument and in turn was upheld by the court. Sternbergh appealed and this appeal has been decided in his favor by Judge Buffington, sitting in the United States Circuit Court for the Pennsylvania district. The effect of this decision will permit Sternbergh to participate in the distribution of the assets of the estate upon the basis of his claim, but will not disturb the trusteeship, which was not attacked in the appeal, as the estate is now practically wound up, the plants and assets having been sold; also he will not be compelled to face a suit by the trustee for the unpaid stock subscription which was held in abeyance pending the decision of the appeal.

R. Hale Smith Takes His Own Life.

R. Hale Smith, president and treasurer of the R. H. Smith Mfg. Co., Springfield, Mass., makers of the Springfield Motometer, committed suicide by shooting himself in the right temple on Tuesday night last, 12th inst. He was found unconscious by his brother shortly before 10 o'clock and expired an hour later. He had shot himself while seated at his desk in his office, after first telephoning his brother and a doctor requesting that they come at once because of "something important," and sending a note to his wife. To ill health and brooding over business worries are ascribed the cause of Mr. Smith's action. He was 63 years of age and a man of much prominence in Springfield, being, among other things, chairman of the Board of Public Works.

To Sell the Sager Productions.

The Motor Distribution Co., of New York City, which was incorporated this week with a capital of \$25,000, has taken the selling agency for Sager equalizing springs, cross chains and protection bumpers manufactured by the J. H. Sager Co., Rochester, N. Y.

MORRIS FINED \$100 FOR CONTEMPT

Manhattan Storage Man Violates Injunction and Rushmore Hales Him to

Court—Morris Blames Clerks.

Having obtained injunctions against the Manhattan Storage Co., the Manhattan Lamp Works, the General Automobile Supply Co., and the Manhattan Screw & Stamping Co., among others, restraining each and all of them from manufacturing or in any way dealing with "colorable imitations" of the Rushmore flarefront design, the Rushmore Dynamo Co. has been unusually active in pressing home their advantage.

Despite the injunctions, it is alleged that several of the defendants have continued to make or sell lamps of the sort and accordingly Rushmore had them cited for contempt of court.

The first of these cases to be tried involved Adolph Morris, of the firm of Morris & Grinberg, who do business as the Manhattan Storage Co. It was heard yesterday by Judge Hough, in the United States Circuit Court in New York, and resulted in a fine of \$100 being imposed on Morris. According to the evidence, Grinberg had escaped legal service. The marshal had been unable to locate him and Morris's lawyer stated that Grinberg "never goes to the Broadway store, being engaged in a manufacturing business in another part of the city."

Morris, who appears to have been "caught with the goods" admitted his guilt and made efforts to settle the case out of court. Rushmore himself had played the part of Sherlock Holmes, and calling at the Manhattan Storage Co.'s establishment had induced one of the salesmen to fit one of the infringing lamps to his automobile while a photographer in waiting took a picture of him while in the act. The court ruled however, that the photograph was not material proof.

Morris practically threw himself on the

mercy of the court. He pleaded that a serious accident to his three daughters had caused him to absent himself from his store for three weeks, and generally threw the blame on his clerks who manfully substantiated his every statement. Morris, they said, had given them strict orders to put the offending lamps in the cellar and not to sell or display them in any way. The fitting of one of the lamps to Rushmore's automobile was explained with exquisite gracefulness. The lamp "just happened" to be reposing on a shelf when Rushmore called, and it was solely to oblige a prospective customer that the salesman took it out of doors and attached it to his car that he might see "just how it looked," and not for the purpose of effecting a sale. It it had not been for the overzealousness of this clerk, there would have been no contempt, Morris's lawyer maintained. thought a \$10 fine would amply cover any contempt that had been shown. Rushmore's lawyer had not a great deal to say, while his opponent played so hard on the harp of human sympathy that Judge Hough at one stage of the proceedings, asked Rushmore's counsel: "Why are you so bloodthirsty?" the judge expressing the belief that "if an order of this court goes out branding this defendant as in contempt, it will affect him in his business relations." Earlier, however, the court declared himself less mercifully.

"I decline to believe," he then said, "that if strong and emphatic orders had been given to the clerks by Mr. Morris that the injunction would have been violated."

Trinidad a Good Possible Market.

According to the Canadian commercial agent at Port of Spain, Trinidad, an opening for motor cars exists in those islands. "This country is especially adapted for motor cars," he states, "having excellent roads for hundreds of miles. Very few cars have been imported, and those only by people who have been abroad and selected for themselves. The number of persons here who are in a position to drive their own vehicles is comparatively large, and if a handy, reliable, and fairly cheap machine were introduced there would be, I think, a good market for them, and the first one on the spot will get the advantage."

Mason to Make Addition to Factory.

With capital stock increased from \$50,000 to \$100,000, the Mason Motor Car Co., of Des Moines, Iowa, plans the building this summer of an extension to its plant. The addition will be 44x150 feet, and will house the painting, upholstering and assembling departments.

Elkhart Building a Cement Factory.

Work has been commenced on a twostory cement factory at Elkhart, Ind., for the Elkhart Motor Car Co. The building will be 40 by 120 feet and is expected to be completed in about 60 days.

The Week's Incorporations.

Norwalk, O.—New London & Norwalk Transportation Co., under Ohio laws, to establish an automobile passenger and freight service.

Jamaica, N. Y.—Jamaica Motor Car Co., under New York laws, with \$1,000 capital. Corporators—J. A. Jones, John Leonardi, F. B. Anderson.

Chicago, Ill.—American Puncture Proof Tire Co., under Illinois laws, with \$60,000 capital. Corporators—G. E. Divon, J. L. G. Dykes, H. S. Osborne.

Allenhurst, N. J.—Atlantic Coast Garage, under New Jersey laws, with \$125,000 capital. Corporators—W. F. Weed, J. F. Padelford, J. D. Brockway.

Camden, N. J.—Pennsylvania Taximeter Cab Co., under New Jersey laws, with \$50,000 capital. Corporators—J. C. Hinckle, W. C. Wilson, H. H. Voorhees, Camden, N. J.

Jersey City, N. J.—Taxi Motor Car Co. of Philadelphia, under New Jersey laws, with \$300,000 capital. Corporators— C. A. Cole, Hackensack; R. F. Tully, F. Vreeland. Jersey City, N. J.

Buffalo, N. Y.—Buffalo Sightseeing Co., under New York laws, with \$15,000 capital; to operate sightseeing automobiles. Corporators—Gibson Howard, Fred J. Weber, Henry G. Breed, Jr.

Camden, N. J.—Autobus Co., The, under New Jersey laws, with \$1,000,000 capital; automobiles, vehicles, motor cars, etc. Corporators—F. R. Hansell, W. F. Eidell, J. A. MacPeak, Camden, N. J.

Jersey City, N. J.—Sterling Vehicle Co., under New Jersey laws, with \$300.000 capital; to manufacture automobiles, motor boats, etc. Corporators—H. O. Coughlin, B. S. Mantz, L. H. Gunther, Jersey City, N. J.

Hoboken, N. J.—International Generator Co., under New Jersey laws, with \$100,000 capital; to manufacture engines, automobiles and motor boats. Corporators—J. E. Whiting, Willard P. Jessup, Frank C. Pringle.

New York City, N. Y.—American Zust Motor Co., under New York laws, with \$50,000 capital. Corporators—Walter F. Sykes and Walter F. Sykes, Jr., 85 Water street; L. Lawrence Weber, 1402 Broadway, New York City, N. Y.

Asbury Park, N. J.—Zacharias Garage Co., under New Jersey laws, with \$100,000 capital; to manufacture automobile vehicles and electric and other motors. Corporators—C. R. Zacharias, L. Hulit, Asbury Park; F. L. C. Martin, Plainfield, N. J.

New York City, N. Y.—Motor Distribution Co., under New York laws, with \$25,-000 capital. Corporators—Bennett Bishop, 54 West Fifty-fifth street; John F. Meader, 536 West 112th street; Edgar B. Bronson, 194 Riverside Drive, New York City, N. Y.

New York City, N. Y.—S. Healey Co., under New York laws, with \$20,000 capital; to manufacture motors. Corporators—Herbert

T. Jennings, 206 Broadway; James W. Mc-Cabe, 215 Pearl street; Sumner Healey, 652 West Fifty-first street, New York, N. Y.

Brooklyn, N. Y.—American Carburetor and Improvement Co., under New York laws, with \$25,000 capital. Corporators—Mathias Weiwoda, 1660 Bushwick Ave.; Fred W. Keller, 1814 Broadway; Henry Berliner, 859 St. John's place, Brooklyn, N. Y.

Buffalo, N. Y.—People's Auto Delivery Co., under New York laws, with \$100,000 capital; to transfer baggage and freight and manufacture automobiles, carriages, carts and motor vehicles. Corporators—David S. Ferris, Henry E. Juengling, and Hugh E. Barrett, Buffalo. N. Y.

New York City, N. Y.—Jenness Motor Truck and Equipment Co., under New York laws, with \$100,000 capital. Corporators, Edgeworth Smith, 136 Fest Fortyfourth street, Thomas E. Fitzgerald, 30 Nassau street; J. Frank Phillips, 605 West 111th street, New York City, N. Y.

In the Retail World.

A. G. Bigelow, of Des Moines, has opened an agency for Maxwell cars at Dubuque, Iowa.

Corder & Flinn is the style of a new firm which has located at Broadway and Seventy-sixth street, New York. They are handling the Acme car.

D. W. Cook, formerly superintendent of the Western Tool Works, Galesburg, Ill., has become a partner in the Galesburg Automobile Co. A. A. Addis is senior member of the firm.

C. Charles Jones, who conducts a garage on Ella street in Beatrice, Neb., is reported to have perfected plans for the erecting of a building 100 by 30 feet, adjoining his garage in which automobiles will be manufactured. He expects to form a \$75,000 company to further the enterprise.

The Livingston & Ramsdell Motor Car Co., New Jersey State agents for the Palmer & Singer automobiles, formally opened their garage in the new De Camp building, 284 Halsey street, Newark, on Wednesday evening. 6th inst. Several hundred visitors were entertained at a collation. This company formerly was in Jersey City.

Germane Becomes Standard Sales Manager.

F. M. Germane, formerly located at Chicago as western representative of the Standard Roller Bearing Co., has been appointed sales manager of the company; he. of course, will have his office at the factory in Philadelphia, where, in fact, he has been located for the past 18 months.

Green Acquires a Top Plant.

C. F. Green has purchased the top plant of the Automobile Equipment Co., Detroit, and combined it with his interests in the Motor Specialty Co. of the same city. Previously Green was connected with the former concern.



POPE TO DECLARE 25 PER CENT.

Substantial Dividend Now Actually in Sight—Facts and Figures Brought
Out at Court Hearing.

The creditors' dividend, which it was known the receivers of the Pope Mfg. Co. have been planning to distribute, but the amount of which was a subject for speculation, now actually is in sight. It probably will be ordered by the courts within the next few days and will amount to 25 per cent-

These facts were brought out last Friday in the Superior Court at Hartford, Conn., when Albert L. Pope, one of the receivers appeared and made an application for an allowance for the receivers, Albert A. Pope of Hartford, and George A. Yule of Kenosha, Wis., for their services.

A. L. Shipman for the receivers, said the receivers of New Jersey had received \$1,500 apiece, and Mr. Pope had received \$2,500 on account in Connecticut before the appointment of Mr. Yule. Both were giving their entire time to the conduct of the business and they asked for \$500 a month apiece.

Joseph L. Barbour, representing six creditors who held claims to the "large" amount of about \$2,000, said his clients were getting restive over the payment of large salaries to the receivers and no payments to the creditors. Mr. Pope countered heavily by stating that he was present at a meeting of a creditors' committee in New York on Thursday where claims of over \$1,000,000 were represented, and that these creditors had stated that they would not oppose a compensation of twice the amount asked.

The difference in the attitude of creditors, as thus shown, caused a smile to appear on the faces of those present.

Judge Curtis ordered an allowance of \$500 for the receivers for their services.

It was in the course of the hearing that Receiver Pope told the court that the Pope company has liabilities of \$1,650,000, quick assets of \$5,000,000 and full assets of \$7,000,000, and that with \$1,000,000 in cash on hand, it was expected that within a few days the court of New Jersey will order a 25 per cent. dividend to those creditors whose claims have been allowed.

Suit to Recover Richcreek Assets.

Harry J. Milligan, trustee for Seth M. Richcreek, bankrupt, has filed suit in Indiana Supreme Court to recover \$10,000 from the Ford Motor Co. and Frederick A. Joss. The complaint alleges that the amount was paid to the two defendants about November 25th by cash and notes upon John N. Navin, the Gibson Automobile Co., J. H. McKernan, Susan McKernan, John J. Williams, English Woolen Co., American Engineering Co., the Capital In-

vestment Co., and others. The complaint alleges that upon the date the notes and cash were given Richcreek was insolvent and his condition was known to defendants. The suit is brought on order of the United States District Court for which Milligan is acting, on the ground that the payment, if allowed to stand, would be granting the defendants preference over all other creditors.

April Report of the E. V. Receivers.

The receivers of the Electric Vehicle Co. have filed with the clerk of the Superior Court. at Hartford, Conn., a report of their transactions during the month of April. The report is as follows:

Sales.

Charges on account and cash sales	\$63,351.35							
Purchases.								
On account	\$17,639.46							
Cash	221,15							
Cash Statement.								
Receipts.								
Cash on hand April 1, 1908 \$ Cash collected on E. V. Co ac-	\$53,816.91							
count	3,137.81							
count	70,004.30							
Cash collected on Selden royalty.	7,721.84							
Interest	136.34							
Illinois receivers	2,207.50							
<u></u>	136.024.07							

:	\$136,024.07		
Disbursements. Payroll Traveling expenses Pur. creditors Freight and express Salesmen's commissions Petty cash Assoc. L. A. M. Insurance Advertising	\$21,239.35 100.00 8,368.00 46.96 120.00 221.69 3,531.30 1,056.44 131.90		
Storage	275.00		
Cash receipts	\$35,090.68 \$136,024.07 35,090.68		

Balance on hand May 1......\$100,933.39

Maxwell Seeking Pacific Coast Site.

W. B. Jameson, representing the Maxwell-Briscoe interests, is reported as having visited several California cities with a view of definitely locating in that part of the country the Maxwell branch factory, which the Motor World several months ago reported as being contemplated. Jameson is quoted as saying that the factory will have a capacity of 3,000 cars and will be in operation before the year ends.

Parish & Bingham to Make Trucks.

The Parish & Bingham Co., Cleveland, Ohio, have acquired an interest in and made arrangements with the McCrea Motor Truck Co., also of that city, to engage in the manufacture of McCrea electric trucks. These are the small trucks designed for what may be termed interior use, that is for handling baggage at railway terminals, for transporting factory products within factory yards, etc.

"BETWEEN THE SHOWS" MODELS.

Pennsylvania Adds Two to Its Regular Line—Planning Factory for Forthcoming Four Cylinder Roadster.

Ordinarily the practice has been to use the automobile shows as the time and place for the introduction of new models. But there is a well defined tendency to break away from the customs of the past in this respect and to bring out new designs during the riding season. The most recent example of the "between the shows" development is furnished by the Pennsylvania Auto Motor Co., who just have announced the addition of two models to their regular product.

One of the new comers, a five-passenger touring car, is styled "Pennsylvania 25." The power plant consists of four cylinders 41/4x41/4, with valves in the heads. The unit axle and transmission construction is similar to that employed in the present type "C" car, though the wheel base of the new car is slightly less than that of the earlier model, being 105 inches. The price of this new model is \$2,250. The first of these cars will be on the road in about six weeks. The other model, which is well under way and which is expected to be given a "try out" during the next three weeks, will becalled the "Vanderbilt." The power plant, transmission and wheel base will be identical with the "25," but with a higher gear ratio and a light two-passenger roadster body. It is announced that this car will be guaranteed to develop a speed of 75 miles an hour and absolutely to be a stock

The company now is preparing plans for a two-story building 125 feet by 281 feet, the building is to be devoted to the construction of a four-cylinder roadster which will be produced in the fall. At the present time the company will give no detail information of this roadster excepting to announce that it will be sold for \$1,200, will be thoroughly up to date in detail and construction and will be made in only one model, or two passenger roadster.

Elmore Taximeter Cabs for Washington.

The Terminal Taxicab Co., who control the carriage privileges of the terminal station at Washington, D. C., have contracted with the Union Automobile Co., the Elmore agents in that city, for 35 Elmore taximeter cabs, deliveries to commence within 60 days. The contract carries with it the exclusive privilege of such service for a period of ten years.

Hobbie Building Buggies Now.

L. W. Hobbie is reported building a 12 horsepower motor buggy on a limited scale in Hampton, Iowa. He styles his creation the "Hobbie Accessible."



Note the straight-line Body—the hall-mark of Quality.

MATHEMATICALLY EXACT

The Oakland car, in its completeness, is an assemblage of parts, every one of which has been studied and worked out in detail, the result being a matter of mathematical certainty.

There were no theories to advance, no experiments to be proved. Engineering skill and extended automobile experience were united to produce the simplest, most efficient and economical motor car possible. Price was not considered, for elimination of costly complexity and a proper understanding of the object in mind regulated that consideration

Maximum of Power; Minimum of Parts

The Oakland car was designed to realize to the fullest extent the possibilities of the gasolene motor in its simplest and most economical form. This includes first cost, cost of maintenance, operation and long life. We honestly believe the Oakland will stand more hard, legitimate abuse with less attention than any other automobile, regardless of price.

Simplicity of Construction

The power plant is a two-cylinder vertical engine, perfectly balanced, absolutely free from vibration, water cooled by the thermo-syphon, or gravity system (doing away with all gears, pumps, etc.), a transmission that the planetary system ought to be, but isn't, shaft drive with all bearings of more generous surface than provided for in most larger cars, and delivers TWENTY HORSEPOWER AT THE DRIVING WHEELS. Lubrication is positive and unfailing. Engine design insures perfect ignition. Carburetion is constant at all speeds. Semi-clliptic front and full elliptic rear springs provide luxurious riding qualities.

The Oakland is making friends by "making good."

Runabout, \$1300 Tourabout, \$1350 Touring Car. \$1350

Oakland agents are already making money. Would you be one of them? Act NOW.

OAKLAND MOTOR CAR CO., Pontiac, Mich.



Published Every Thursday by

The Motor World Publishing Company

foseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

. . .

TELEPHONE, 2652 BEEKMAN.

٠.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money 'Orders, should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

ATChange of advertisements is not guaranteed inless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, MAY 14, 1908

The Matter of Personal Responsibility.

Nothing would appear more supremely ridiculous at first thought, than the decision of the Tribunal of Louviers that the driver of a motor car is personally responsible for the safe conduct of the driver of another following directly behind it. As well, one might say, make him responsible for the safety of the driver of the car ahead. But then, French laws and French legal decisions are frequently more or less peculiar according to the American understanding.

For example, a law recently enacted provides that any "conductor" or owner of a motor vehicle who, "having been in a collision with any other vehicle or individual or object, does not immediately stop and give his name and address to the police or other representatives of the law," shall be punished by a heavy fine and several months imprisonment. This is entirely independent of the offender's actual responsibility for the

accident, independent of its extent, of its nature. Thus the owner of a car which became involved in an accident due solely to contributory negligence on the part of a second party, if he failed to identify himself to the police at once, might be subject to heavy punishment for the secondary and wholly independent offense.

That there is some excuse for such queer laws as these appear to be, is evidenced from a glance through the morning papers almost any day. Human nature is unchanging, and the causes which have led to such enactments are the same in all countries. Possibly they are accentuated in lands where good roads prevail, but they exist everywhere.

The truth of the matter is that every automobile driver ought to be impressed with his own personal responsibility in the matter of the power under his control. It is a power which may make him disreputable, a menace to the safety of all other users of the highway, or an equally inoffensive member of the crowd. Where that responsibility is lacking, the inevitable counteracting tendency is to establish his liability in one way or another by legal means. However unpleasant the legal form of remedy may be, it is frequently necessary, though not always justifiable in its severity.

In America, though the motoring and non-motoring groups of the public are succeeding more or less successfully in adjusting their differences, and as a rule, are dwelling peaceably together, there still is lacking in a large proportion of the former class the proper spirit of personal responsibility. In just measure to its lack, the chance of increasing weight upon the legal yoke is developed. Most automobile laws assume the purely logical aspect of class legislation. As such they are all the more hateful than would be the case were their application more general. But it is to be remembered that in most instances, they could not be established, were it not for the carelessness of many owners and their drivers in the very matters against which the apparently petty laws of France and other European countries specifically provide.

Lubricants and Lubrication.

Oddly inconsistent is the motorist who, after spending a half hour in anxiously pawing over a dozen different kinds of spark plugs before he can make up his mind which one to choose, will hastily order the

garage attendant to put a half pint of oil in the car, and drive away, satisfied that he has done wisely. Another time, perhaps, the same motorist will spend two or three hours adjusting his lubricator; or use up a half day with a coil expert, because his ignition system is not working as it should and the plugs persist in sooting up-or . down. So long as he pays a good price for his oil, and takes pains to see that it is properly fed, it seldom occurs to him that the root of his troubles may be found in an amber liquid with a bluish cast, which he has purchased innocently by the price tag alone. Yet it is safe to say that no small portion of the motorist's engine troubles may be defined and perfectly well accounted for by the three little letters which spell

The great difficulty is that the average motorist is in no way capable of specifying the qualities which are actually requisite in a proper oil for his engine, and that were he so able, he would not be able to prove their existence without extensive laboratory paraphernalia. Such being the case, there is but one method of escape from the evils of stinking exhaust, foul cylinders, and gummy bearings, which is to buy only a brand which is recommended extensively and known to be suitable. Unfortunately not every maker is as scrupulous as he might be in recommending an oil for his car, but those who are careless in this respect are comparatively rare. It is a fortunate circumstance also that there are on the market several well known brands of oil which are so reputable as to be beyond question. The motorist who specifies either of these -and gets it, is practically certain of obtaining satisfactory results.

There is still the chance, however, that the dealer may belong to the unhappy breed of substitutors, or that in his effort to swell his profits, he is in the habit of boosting the price of inferior oils, for the sake of attracting the custom of buyers who crudely suppose that high price and good quality go together in the compounding of lubricant. Chicanery of this sort is deplorably common, to be sure. Furthermore, there appears to be but one way in which it is to be crowded out of existence. That is for the buyer to insist on obtaining his own brand, and making trouble for the dealer who persists in selling him another.

Dealers who are ambitious to advance their own interests might even make it a point to advertise their stocks of popular brand -lubricants, to recommend them to all customers, and explain how it is that unknown and nameless brands may be injurious to the machine and so doubly expensive to use. If there is insufficient profit in the reputable oils, it would even be more advantageous to advance the price of the standard article than to boost a poorer or a nameless grade which is of questionable quality. It would be better for the market, better for the dealer in the long run, and vastly better for the public. For once it became understood that the brand was the only practical and available criterion of real worth, there would be no quibbling at terms which were within reason.

Improvement of the Electric.

It is a flattering characteristic, rather than otherwise, that the electric vehicle should have attracted so little attention, relatively speaking, during the past two or three years. While the gasolene-driven machine has continued to be an object of anxious solicitude to the general public, the public, and even a good share of the technically minded as well, practically has ceased to notice the electric. .It has become sufficient unto itself, and henceforth its properties and its advancement are relegated chiefly to those to whom its interests are of a specific nature. Outside its own particular branch of the trade, the problems connected with the design and construction and maintenance of the electric vehicle have come to be regarded as wholly incidental to its operation, while that has become merely a matter of dollars and cents with the user. It is rendered conspicuous by the very absence of uncertainty in its performance, and by the economy which is its strongest advantage.

Since its development was lost to view, more particularly since the general public ceased to prate of the perfect battery of former promise, many improvements have been made in its construction. The more significant of these are sketched by, Mr. Churchward elsewhere in this issue. Aside from the battery question, the improvements in motor construction and mounting. in controller design and in the general setup of the vehicle as a whole have been of more sweeping nature than the average motorist has been led to suppose. In fact, so great has been the success of these improvements that the electric vehicle engineer has been forced to resort to close discriminations and the finest of observations in order to carry the improvements still further.

Hence the investigation of the subject of "wattage," and the factors which lead to its reduction. If, wherever the term is employed, the word horsepower be substituted for it, the non-technical reader may be better able to appreciate the significance of its use. Both expressions are equivalent to the extent of signifying the energy absorbed in transporting the vehicle and its load. But the electrical unit is subject to a finer analysis that the mechanical term, so that it is possible to reduce the total figure to terms governed by conditions of load, grade, road condition, mechanical friction. and even to the number of stops made per mile or per hour.

To the average motorist, it may be, these factors do not appeal. But when it is considered that the wattage is what the owner pays for, that it is directly proportional to the precious dollar, its importance becomes more evident. What is quite as much to the point here, however, is that while the designer of the gasolene vehicle is still struggling with little details of design, the electrician has got on to broader fields and has reached a point where his further improvements may be guided and controlled solely by the question of economy in service. Except for the power plant, the two types of vehicle are similar, and the problems connected with their design are closely related. Up to this point, the two branches of the industry are abreast. In power plant design, and in upkeep, however, the latter is considerably in the lead.

Although comparatively little stir is being made just now by the two-cycle movement, that fact should not be taken as indicating a cessation of development, or that the propaganda is losing strength. On the contrary, if the records of the Patent Office are to be accorded any value, nearly as much activity is being devoted to the perfection of the two-cycle motor, as to the more common type. The voluminous nature of patent returns does not measure progress, to be sure, but it does measure the stuff of which progress is made—a just appreciation of the inducements and possibilities of the type. The two-cycle principle has been reduced to practical terms. Many motors now in use are giving absolute satisfaction. All that is required, is proper confidence in it among users, in order to stimulate the makers to further efforts at perfecting it.

COMING EVENTS

May 15, Algonquin, Ill.—Chicago Motor Club's annual hill climb on Perry and Phillips hills.

May 16, Wilmington, Del.—Delaware Automobile Association's 45 miles roadability contest to West Chester, Pa., and return.

May 16, Paterson, N. J.—North Jersey Automobile Club's 100-mile endurance run.

May 16, Hartford, Conn.—Hartford Automobile Club's 200-miles endurance run.

May 20, Indianapolis, Ind.—Indianapolis Automobile Trade Association's 160 miles sealed bonnet endurance run.

May 23. Albany, N. Y.—Albany Automobile Club's annual hill climbing contest up Menand's hill.

May 30, Salem, N. J.—Salem Horse Show and Athletic Association's track meet.

May 30, New Bedford, Mass.—Hill climbing contest up Smith Mills hill.

May 30, Denver, Colo.—300-miles road race for stock chassis.

May 30, Boston, Mass.—Bay State Automobile Association's race meet at Readville track.

May 30, Scranton, Pa.—Scranton Automobile Club's hill climbing contest on Scrub Oak mountain road.

May 30, Newark, N. J.—New Jersey Automobile and Motor Club's 12-hours endurance run.

May 30, Bridgeport, Conn.—Automobile Club of Bridgeport's third annual hill climb.

May 30, Wilkes-Barre, Pa.—Wilkes-Barre Automobile Club's third annual hill climbing contest up Giant's Despair.

May 30, Baltimore, Md.—Motor Car Racing Association's race meet at Pimlico track.

May 30, Cleveland, Ohio.—Cleveland Automobile Club's second annual hill climbing contest.

May 30, San Francisco—California Automobile Dealers' Association's endurance contest.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 24, 25, 26 and 27. Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

July 9. Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

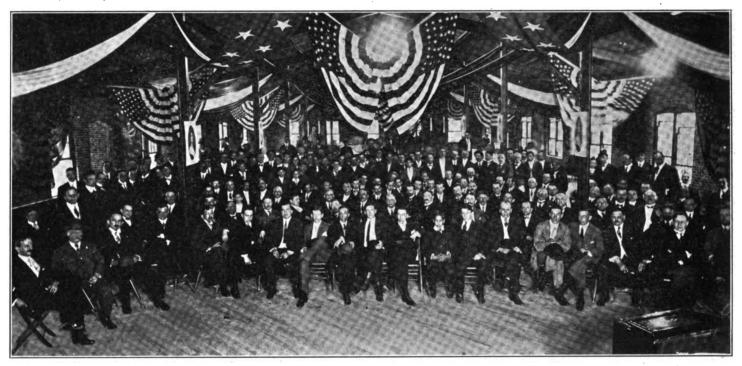
GOV. FORT PRESSED THE BUTTON

Ajax-Grieb's New Plant Starts Under Distinguished Auspices—Trenton's Mayor Assists in the Ceremonies.

When Governor Fort pressed the button which started in motion the machinery in the new plant of the Ajax-Grieb Rubber Co., at Trenton, on Monday, the 11th inst.,

dress by President De Lisser. He spoke of the early struggles of the company and dwelt strongly on the financial and moral support that was given to the new enterprise by Henry Ford, J. D. Maxwell, Benjamin Briscoe, Robert A. Patterson, William Mitchell Lewis, and James Couzens.

"Without the valuable assistance which these men rendered," said Mr. De Lisser, "our undertaking must have resulted in failure. But they stood by us with counsel "I am deeply sensible of the great debt which the Ajax-Grieb Rubber Co. owes you," continued De Lisser. "I cannot express my feelings as I try to tell you how much we appreciate the friendship that has been given us by you and by the interests you represent. Even my best friends have never granted that I can make a speech, yet if I possessed the ability of a trained orator I could not tell you how much I thank you for the interest in our success that you



AJAX-GRIEB GUESTS ENJOYING THE VAUDEVILLE ENTERTAINMENT

his action was perhaps more typical of the sentiment of New Jersey citizens toward the automobile that that of the law makers of the State. The occasion was the official opening of a substantial addition to the new plant, which recently has been completed.

By special trains from New York and Philadelphia the guests of the company were brought direct to the factory, where many of the prominent citizens of Trenton already were gathered. With a profusion of flags and bunting the new brick building presented a gala appearance. The visitors were conducted to the enormous room which occupied the entire upper floor, where the opening exercises were to be held. Here the decorative scheme was continued; the walls and ceiling being almost hidden by American flags and bunting, and posters of the Ajax girl, while at one end of the room was the stage for the speakers and later was the scene of a vaudeville entertainment.

As Governor Fort and Mayor Madden of Trenton entered the room they were heartily cheered by the assemblage and were conductd to the stage by Horace De Lisser, president of the Ajax-Grieb Co., and Harry Grieb.

The exercises were opened with an ad-



HORACE DELISSER (AT WHEEL). HENRY GRIEB, GOVERNOR FORT AND MAYOR MADDEN

and encouragement, and this interest backed by the generous and enthusiastic support of our friends in the automobile industry has made possible and necessary this enlargement of the plant, which is the occasion of this gathering. have shown in the past, and are showing now by assisting in making memorable this evidence of the increased recognition of the merits of our product which compels this addition to our factory."

Governor Fort was then introduced and

WHAT AILED THE CARBURETTER

Simple Trouble that was a Long Standing Mystery—The Cause Easily Eliminated When Found.

made a short speech in which he referred to the Ajax-Grieb company as being an important factor in the development of the State's manufacturing interests. He congratulated the company on their progress and wished them a full measure of prosperity, and expressed the hope that other industries would locate in Trenton and help to strengthen the reputation which the city already had of not being dependent on its legislature for its prominence amongst American cities.

Mayor W. F. Madden, of Trenton, followed the Governor, and spoke in the same vein. He congratulated President De Lisser and his associates on their success and hoped that the future of the company would see its enlargement and development as its past had seen it.

At the close of the speeches the guests were served with lunch, after which they were shown through the factory and initiated into the mysteries of tire making. Later they again assembled on the upper floor where they were joined by the employes of the company and all witnessed a short vaudeville program.

The new factory increases the Ajax capacity to 600 complete tires per day, covers and inner tubes, to say nothing of an immense output of druggists' sundries and other moulded rubber specialties.

Law that Saps Value of Patents.

Beginning August 1st., a new provision of British patent law goes into effect which will act as a direct curtailment of the validity of patents covering articles of foreign manufacture. The clause, which is known as "Section 27, of the Patents and Designs Act of 1907," provides in substance that "Any article patented in the United Kingdom, which is manufactured exclusively or mainly abroad may, on the application of anybody bringing the facts to the knowledge of the Comptroller of Patents, be considered as not protected by letters patent." In consequence of this provision, it is expected that considerable alteration will be made in the status of firms of foreign origin doing business of a proprietary nature in the British Isles.

Cadillac Conducting a Pictorial Campaign.

In a campaign to reach new customers a novel educational and selling method is being developed by the Cadillac Motor Car Co., of Detroit, involving the use of a "picture show" and a lecturer. A complete and expensive stereopticon equipment showing more than 200 views, either taken inside the factory or illustrating Cadillac achievements in various parts of the world, is provided, accompanying which is an hour's interesting and breezy talk on the subject of automobiles in general and the Cadillac in particular. The company's agents invite owners and "prospects" to their local salesrooms to constitute the audiences, and the entertainment is said to be already "booked ahead" for the entire season.

It is often held against the gasolene engine that one of its most provoking characteristics lies in the fact that many of the trifling disarrangements which may from time to time affect its running are exceedingly baffling to locate, the difficulty in this respect often being greatly out of proportion to the seriousness of the trouble. Several seasons ago a prominent expert humorously hit off the situation by saying that in automobile practice the chief difference between steam and gasolene engines was that "with steam engines it takes but a minute to find the trouble and an hour to fix it, while with gasolene motors it takes an hour to find the trouble and a minute to fix it." A recent verification of the latter half of the epigram came within the experience of a prominent New York motorist who has been driving for several years and who rightly considers himself not inapt in finding and remedying trouble when he

For several weeks he had been bothered with his engine missing and cutting uncertain capers. Consultation with repairmen and others soon narrowed the cause down to the carburetter. The latter was taken off and cleaned, the needle valve readjusted and its parts inspected. When the device was replaced the car apparently ran all right but an out of town trip in hilly country developed all the old faults again. In steady climbing on long hills the motor would work very well but on the more level roads where frequent alterations of speed were necessary, it would behave badly indeed. Search after search revealed nothing calculated to disclose the nature of the difficulty, and the driver of the car went from week to week getting the best service out of the machine that he could, but constantly annoyed by the mystery.

In preparation for the drive to the Briarcliff race, he was cleaning the exterior of his engine and oiling up, when he discovered that every time the accelerator pedal was pressed a column of gasolene squirted from the top of the carburetter float chamber, the latter being completely flooded: A moment more and the cause was discovered. The rod leading from the accelerator pedal to the throttle valve of the carburetter passed, in its movement, over the top of the float. Consequently the float would be pushed down every time the accelerator pedal was depressed or released, flooding the carburetter. The remedy was as simple as the cause and consisted in merely clipping off about quarter of an inch from the top of the pin, so that the accelerator rod would not strike, after which the engine ran as smoothly as could be desired. The original cause of the trouble was probably a too vigorous depression of the pedal, slightly bending the rod so that it touched the pin.

Now the Art Dealers Complain.

Again is the automobile accused of interfering with the success of mercantile pursuits. The jewelry trade, having sent forth its wail that motor cars were preferred to gems, must now yield the floor to the picture dealers, who are taking their turn in ascribing the dullness in business to the preference of the wealthy for automobiles instead of paintings. A dealer, who is prominent in art circles, recently speaking of business depression said:

"There is little or nothing being done by the picture dealers. Not only has the volume of sales materially decreased, but it is extremely hard to make collections. One of my patrons, with whom I have had business relations for several years, 'held me up' on the matter of a comparatively small bill which was overdue, and a day or two later I saw him enjoying an outing in a new automobile, which he had just purchased, though he has three others. I have bought several pictures lately," the art dealer continued, "from men who wanted the money for motor cars. Walls which have contained five of six paintings now are occupied only by three or four, and these are separated with remarkable ingenuity so that the effect of the display continues to be good.

"Pictures have always been considered a luxury and automobiles used to be so considered, but the conditions seem to have changed and with the automobile in the necessity column there is little chance of supplying luxuries in the shape of pictures to men who want necessities in the shape of motor cars."

Continental Gets Big Order for Balloons.

While generally it is assumed that the activities of the Continental Tire & Rubber Co. are largely confined to the manufacture of tires, a recent order received from the British government for balloons, proves that such is not the case. The India office have placed an order with the Continental company for 48 balloons, to be used for scientific purposes. The company already has supplied material for many successful air ships, balloons and aeroplanes, notably the "La Patrie," Zeppelin, "Ville de Paris," De la Vaux, and the Farnum aeroplane.

Automobiles for Mail Collection.

Automobiles are to be extensively used by the French government for the collection of mail in Paris. A number of cars were placed in this service a few days ago. It is intended to extend rapidly the use of automobiles for the purpose, and it is thought that by October there will be 120 gasolene cars used for the collection of mail in the French capital.



LOWELL PROJECTS BIG ROAD RACE

Popular Movement for 200 Miles Contest on July 4—Ten Miles Circuit of Fine Roads Available.

Lowell, Mass., has contracted the road racing fever. If plans of the Lowell Automobile Club materialize the fever is expected to break out in a 200-miles race over a ten miles circuit in that city on July 4th. Though the matter was broached only a few days ago the proposition seems to have been received with much enthusiasm in Lowell and no difficulty is anticipated in raising the \$10,000 which it is estimated will be required for the race.

A ten miles course has been selected between Lowell and Tygnsboro, including the smooth and level Merrimac boulevard, and Congressman Butler Ames has offered a trophy for the race. Tiffany already is at work on the design, it is stated. The prime movers of the affair are John O. Heinze and Frank S. Corlew, president and vice-president, respectively, of the Lowell Automobile Club.

While no definite statement has been made concerning the eligibility of cars for the race it is probable that it will be restricted to stock chassis. The contest will be limited to 12 cars and the entry fee has been fixed af \$250.

According to Corlew the entire course is to be guarded by militiamen, it being claimed that the militia authorities in Lowell and Lawrence and the rank and file of the men are wlling to turn out for the purpose, and that under the law they may turn out in uniform and with arms on the Fourth of July without an order from the governor. If 500 militiamen can be secured the guarding of the course will likely be better than at any race ever held in this country.

The course, which has been selected extends along the boulevard to Tyngsboro bridge, then turns to the right over a short stretch of cross road and then down Varnum avenue to the boulevard. At the Lowell end the club plans to improve a short piece of road, making banked turns and a safe and easy connection between Varnum avenue and the boulevard. This will do away with all sharp turns, as those at the upper turn also will be modified. With its few turns and two long stretches the Lowell course will offer plenty of chance for speeding and as it is only ten miles around will add to the excitement, as the cars will be constantly passing and repassing each other.

The Lowell Club has asked for subscriptions for the promotion of the race and the profits to be derived from the entry fees and the sale of grandstand seats will be divided between the city of Lowell, the town of Tygnsboro and the State Highway Commission, it is stated. One of the

main objects of the race is to attract the attention of automobile manufacturers to the Spindle City, as it is claimed that the city of Lowell offers unusual advantages for the location of automobile factories.

Fifteen Events for Dead Horse Hill.

Fifteen events have been carded for the annual Dead Horse hill climb promoted by the Worcester (Mass.) Automobile Club, announcement of which was made this week. The Worcester City Council will give a hearing on the club's petition for the right to close the roads on the day of the climb and it is anticipated that there will be no trouble in this respect. Meantime the work of repairing the roadbed and putting it in shape for the climb is progressing. The list of events is as follows:

Gasolene cars with 60.1 to 75 horsepower, inclusive; gasolene cars with 40.1 to 60 horsepower, inclusive; gasolene cars with 24.1 to 40 horsepower, inclusive; gasolene cars with 15.1 to 24 horsepower, inclusive; gasolene cars with 15 horsepower and under; all makes of motorcycles; free-for-all, open to cars of all types and motive power; gasolene cars selling for \$850 and less; amateur event, owners to drive, for the Worcester County championship trophy, to be won three times in succession; gasolene cars selling from \$851 to \$1,250, inclusive; cars selling from \$1,250 to and including \$2,000; free-for-all, gasolene stock cars only; cars selling from \$2,001 to and including \$3,000; cars selling from \$3,001 to and including \$4,000; cars selling from \$4,000 and over.

Events for Jamaica Subway Celebration.

Entry blanks for the straightaway races. to be held on Hillside avenue, Jamaica, Long Island, on June 5th, under the auspices of the subway celebration committee and the Long Island Automobile Club were issued Tuesday. The contestants will be divided into nine classes, as follows, each class having a change for a try at one kilometre, one mile and two miles, although it will require a separate entry for each: Open to gasolene cars selling under \$1,250; open to gasolene cars selling from \$1,251 to and including \$2,000; open to gasolene cars selling from \$2,001 to and including \$3,000; open to gasolene cars selling from \$3.001 to and including \$4,000; open to fourcylinder cars selling for over \$4,000; open to six-cylinder cars selling for over \$2,500; free for all, open to cars of all types and, motive power; open to steam cars only (stock); stock chassis open to cars having 301 to 550 cubic inches piston displace-

Wilmington Schedules a Reliability Run,

Saturday next, 16th inst., the Delaware Automobile Association will promote its first contest. It will be in the nature of a roadability run, on schedule time, over a 45 miles course from the Wilmington (Del.) court house through Kennet Square and West Chester back to the starting point.

AMERICAN ENTRY RETAINS ITS LEAD

Credited Fifteen Days in New York-Paris
"Race"—Contestants Now Nearing
Siberia on Steamship.

Because of the lost time in going to Alaska, where the route proved impassible, The Thomas car in the New York-Paris "race" has been allowed a 15 days' start over its competitors, from the time they reach Siberia.

The Italian Zust and the French De Dion did not go to Alaska, but sailed from Seattle for Japan, and the judges of the race at a recent meeting decided that the Thomas would have been 15 days ahead of them if it had done the same thing. The German car, Protos, has been handicapped 15 days back of the Zust, and De Dion because it was put aboard a train and shipped from Ogden, Utah, to Seattle.

All of the cars are now on the boat from Japan to Siberia, and on landing the American car will be counted as 15 days ahead of the French and Italian cars and 30 days ahead of the German entry.

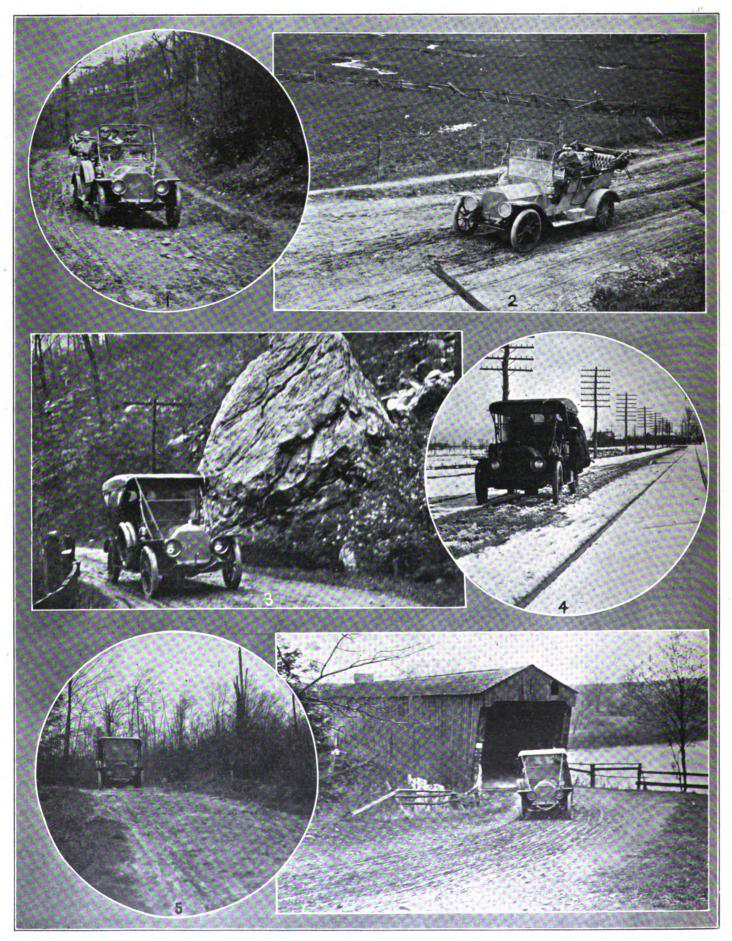
Trophies for Hartford Endurance Run.

What is expected to prove to be one of the largest endurance runs ever held will take place on Saturday of this week, 16th inst., over a course of 174 miles leading from Hartford, arranged by the Automobile Club of Hartford. When the entries closed this week 49 nominations had been made. Six trophies are to be disposed of as follows: To the car listing at more than \$1,500 which makes the nearest to a perfect score; to the car listing at \$1,500 or less which makes the nearest to a perfect score; to the car listing at more than \$1,500 and less than \$3,000 which consumes the least gasolene; to the car listing at more than \$3,000 which consumes the least gasolene; to the car listing at less than \$1,500 which consumes the least gasolene, and to the car which does most consistent work.

Proposed Double Transcontinental Race.

Having been "second fiddle" to Le Matin, of Paris, in the New York to Paris race promotion, the New York Times is now endeavoring to get up a race of its own, and has, undertaken to interest manufacturers and others in a trans-continental contest across North America, from New York to San Francisco and back again, a different route being taken for the western and the eastern trips. So far all the plans are rather hazy, but in addition to definitely promising a suitable trophy the following tentative plan of the contest has been outlined: A contest for regulation stock cars under a maximum power and over a minimum weight, a speed trial, an endurance test, the cars to be handled by a single crew, and scored according to a strict schedule.

VIEWS ON THE GLIDDEN TOUR ROUTE FOR 1908



1. ON THE ROAD TO PITISBURG. 2. THROUGH PENNSYLVANIA OIL FIELDS. 3. PICTURESQUE ROAD TO JOHNSTOWN, FA.
4. JUST OUT FROM BUFFALO. 5. ON THE CREST OF THE ALLEGHANIES. 6. COVERED BRIDGE ON ROAD TO MARRISBURG.

SELECTING THE GLIDDEN ROUTE

Pathfinders Make Substantial Progress— New York not in Itinerary and New Jersey to be Avoided.

Buffalo, Pittsburg, Philadelphia, Albany and Boston will be the four largest cities touched by the American Automobile Association's touring contest for the Glidden trophy this year and they will be reached in the order named. New York City will not be entered and New Jersey soil will not be touched during the tour.

The route was changed on Monday so as to include Philadelphia and avoid New Jersey. Secretary Dai H. Lewis and his sixcylinder Premier pathfinder had reached the Delaware Water Gap, but Chairman Hower directed that they go back to Harrisburg and lay the route from there to Philadelphia. The big car, driven by Ray Mc-Namara, did not get away from Harrisburg until nearly noon on Monday and did not reach Philadelphia until Tuesday night. Tuesday's run made the twelfth day out for the pathfinding car, but on the tour itself Philadelphia will be the stopping place on the night of the sixth day out, or the fifth day of travel, the Sunday previous being spent at Bedford Springs, Pa.

The reason for eliminating New Jersey from the route of this year's tour is the sandbagging motor law of the State. It was originally planned to run from Philadelphia to Atlantic City and spend Sunday at that resort. It would have cost the contestants about \$13 license fee for each car, however, for the two days and so the State was avoided and instead of getting a reasonable fee, like other States, it will get nothing. Its principal resort will likewise be minus several thousand dollars that the tourists would have spent there but for the attitude of the State's law makers toward those who use automobiles.

The run for each day and the stopping places at night and Sundays, as thus far arranged, are: July 9, Buffalo, N. Y., to Cambridge Springs, Pa., 117.4 miles; July 10, Cambridge Springs to Pittsburg, Pa., 110.2 miles; July 11, Pittsburg to Bedford Springs, Pa., 106.4 miles; July 12 (Sunday), at Bedford Springs; July 13, Bedford Springs to Harrisburg, 107.3 miles; July 14, Harrisburg, Pa., to Philadelphia, 133.5 miles; July 15, Philadelphia to Milford, Pa.; July 16, Milford to Albany; July 17, Albany to Boston.

From Boston the tour will go up into Maine, thence back into the White Mountains and probably will disband at Saratoga on July 22 or 23. The details beyond Boston will not be settled until after the pathfinding trip is completed.

As the Premier pathfinder has proceeded, Secretary Lewis has made note of every turn, of the character of the roadbed, the land marks, the toll gates and their fees, and of the distances between each turn and crossroad, so that the route book issued will be more complete in detail, more accurate and of permanent value as a touring guide. Nearly all of the overnight stops will be in big cities, where there are ample accommodations, and arrangements have been made all along for putting up the tourists at regular rates.

Following the usual custom, the first few days of the tour have been made comparatively easy and the harder days will come later in the mountains.

Four Days' Carnival for Stroudsburg.

A four day automobile carnival during the last week of June is the ambitious program announced by the recently formed Monroe County Automobile Association, of Stroudsburg, Pa. If present plans are carried out the carnival will be one of the biggest of its kind that has been attempted. For the first day it is planned to run a sealed bonnet reliability contest, starting simultaneously from New York and Philadelphia, to end at Delaware Water Gap, and this will be followed on the second day by several hill climbing events for amateur drivers to be run on a less tortuous hill than that used by the professionals. The third day will be devoted to a series of time trials over a level stretch of road near Mount Pocono, while a half mile track in the neighborhood of Stroudsburg will be used for a gymkhana meet on the final day of the carnival.

Trophy to be Converted into Badges.

A solution, as unique as it is unusual, has been found by the Norristown Automobile Club, by which it may dispose of the silver trophy that was won by 15 perfect scorers in its recent endurance run. The owners and drivers of the cars that finished the run without points against them met last week and voted to melt the trophy that had been offered to the winning car, and run it into badges. They considered this expedient more satisfactory than having their names engraved on the cup.

Stanley Hill for Cleveland's Climb.

For the first time since the inauguration of its annual hill climbing contest the Cincinnati Automobile Club will not hold its contest on Paddock hill this year. The date has been set for May 28th, and Stanley avenue has been selected as the venue. The course is a new one averaging from 11 to 15 per cent. grade. It has two turns, but both are slight. The change was made because of the poor condition of the Paddock hill road.

Following the lead of other prominent clubs throughout the country, the Albany (N. Y.) Automobile Club is determined upon an active compaign against overspeeding. All the members are entering an agreement to report offenders.

CLUB COMPELLED TO TOE MARK

Withdrawal of White's Protest did not Settle Wilkes-Barre Snarl—All Differences Now Reconciled.

Despite the fact that Walter C. White withdrew his protest in reference to the Wilkes-Barre hill climb the A. A. A. racing board declined to grant a sanction to the Wilkes-Barre Club until late last Friday afternoon.

The facts of the case are that White's withdrawal of his protest was absolute and unconditional but the racing board held that the Wilkes-Barre Club should comply with the original ruling of the racing board. For that reason the sanction was withheld until the terms of the original ruling of the racing board were fully complied with. The free-for-all trophy in last year's hill climb, the Board of Trade Cup, is in the possession of J. B. Ryall, and he absolutely refused to surrender it.

The Wilkes-Barre Club offered to give Mr. White a cup equal in value to the Board of Trade trophy and, thereupon, the racing board allowed the sanction. White, however, withdrew all opposition two weeks ago, when the Wilkes-Barre Club offered to give him a medal and to re-engrave the Board of Trade cup, and was in no way responsible for the eleventh hour mix-up.

Reliability Run Plans Kept Dark.

Hiding a heavy secret in their breasts, the members of the Indianapolis Automobile Trade Association are going around with their fingers to their lips, trying to conceal the rules and route of the reliability run which is slated for May 20. These are to be announced only a day or so before the day of the run, so that intending competitors will not have a chance to practice on the route or make elaborate special preparation of their cars. It was also thought that an early announcement of the route would perhaps arouse the antagonism of farmers and others along the roads specified, who might put obstacles in the way of the run.

Smooth Roads for Rocky Mountain Run.

In spite of the fact that it is to be called the "Rocky Mountain endurance contest," thereby suggesting leaps from crag to crag, and the hurtling of precipices, the race for stripped stock cars which is to be held at Colorado Springs, Col., on Memorial Day, will be held on roads that are smooth and far from mountainesque except in their scenic features. The promoters have employed a big force to put the roads in perfect condition for the contest and a large entry list has been secured. The course is known as the Sand Creek-Barr-Brighton course and the grandstand will be at Sand Creek.



PHOTOGRAPHING ROAD RAYELIING

Government Secures Pictorial Records of the Effects of Motoring—Relation of Speed to Destructiveness.

With a battery of photographers to "snap" its flight, a big racing car going over a mile a minute threw a scare into the farmers along the celebrated Conduit road, outside of Washington, not long ago. Many of them thought it was a machine designed for some of the big world events, and that the photographers were employed by the newspapers. Such was not the case, however, the surprising feature of the affair being that it was wholly a United States Government enterprise.

Inasmuch as the government asserts its ownership and control of the Conduit road, regarding it as a military highway, it can permit as high speed as it likes, a legal point which Marshall Collins of Glen Echo was at one time prone to dispute, but the strength of which has since forced him to give up arresting motoring diplomats and others for the more peaceful occupation of working in a dry goods store. Therefore the Government's racing car was allowed to go the limit.

The object of the apparently mad dashes and the corps of photographers was to give the Office of Public Roads accurate data as to the effect that high speed automobiles have on rock surface or macadam roads. To this end the trials also included the passage of horsedrawn vehicles and automobiles of various weights and speeds, the dust clouds raised by each being photographed.

What was disclosed as a result of the experiments is made known, by the official statement which is in part as follows:

"Those who witnessed the experiments near the national capitol could not doubt for a moment that the various road experts all over the world are correct in the opinion that very rapidly driven automobiles are tearing up the surface of the macadam road, for not only were huge clouds of dust lifted into the air and blown off the road, but careful examination showed that the material under the wheel tracks of the machine was distinctly loosened and ravelled even during the short period of these tests.

"No such effects were noticeable after the passing of iron-tired vehicles; the series of tests beginning with the passing of a horse-drawn vehicle. This was photographed as it moved along, and also as the wagon tires passed a given mark. Then the automobiles were sent over the course. The first was a heavy-weight touring car moving at five miles an hour. A series of pictures was made of that car at varying rates of speed until its maximum of 45 miles an hour was attained. Then the work was taken up by the huge racer, which tore down the road

first at a speed of 50 miles an hour, then at 55, 60, and finally at 65. It fairly lifted the road surfacing material as it sped along, regular ridges of rock dust rising from the rear wheels and floating away in blinding clouds. Other tests were made and other pictures taken of various types of heavy cars and runabouts. It was plainly noticeable and was commented on that automobiles moving at the slow rates of speed equal to the speed made by horse-drawn vehicles made very little dust, the theory that fast speeding automobiles are responsible for road surface destruction being pretty thoroughly substantiated by these means.

"The results of this interesting bit of road work will be carefully studied and put together in a paper or papers to be presented to the International Road Congress which will meet at Paris on October 11; for so far-reaching are the ravages of the automobile on the wonderful roads of France that that country has urged highway engineers of all lands to assemble at her gay metropolis in the fall to take up the problem and strive for a solution of it.

"It has long been known to highway engineers that automobiles were shorteningthe lives of the rock surface roads of the world and many experiments have been made in the past six or seven years to determine the actual cause of the damage done. To understand how the soft broad tires of the modern motor car can work an injury to a surface that not only withstands, but improves under the constant passing and repassing of vehicles with iron tires, one must be apprised briefly of the theory on which, first Tresauget of Lomoges, and later MacAdam of Ayr, worked when giving such highways to the world. They reasoned that a road surfaced with bits of stone would improve under wagon traffic because the iron tires of the passing vehicles would constantly crush the stones and form rock dust particles; that those rock dust particles would not merely fill in all the interstices between the stones, but would also form a surface dust binder; the wettings and rollings tending to cement the dust in a shell-like surface and thus make the entire road one traffic-withstanding, water-shedding mass.

"They reasoned well and wisely. The macadam roads lived up to the theories of their inventors and improved with the passing years until the advent of the automobile. It was but a short time after it came into vogue that highway engineers in all civilized lands learned that a new condition was confronting them, and established customs were being menaced. The trouble was traced to the automobile and studied. It was noted that the soft rubber tire was the highway menace. It crushed no rock itself, and therefore contributed no quota of the needful surface dust binder, while the tremendous tractive force of the rear wheels drew up the dust made by the iron-tired wagons and sent it whirling away over adiacent lands.'

FOR GOOD ROADS AND GOOD LAWS

Partial Program for the Convention at Buffalo—Highway Experts and State Governors Who will Attend.

If present plans do not miscarry the good roads and legislation convention which is to be held in Buffalo, N. Y., Tuesday and Wednesday, July 7th and 8th, by the American Automobile Association will assume more importance than was at first supposed. The committee, which has in charge the arrangements for the convention met in New York City on Tuesday of this week and showed that it has not been idle since being formed.

Chairman Robert P. Hooper, of Philadelphia, presided, the other members in attendance being Charles Thaddeus Terry, Frederick H. Elliott, and Alfred Reeves, New York City; Paul C. Wolff, Pittsburg, and George C. Diehl, Buffalo.

Although the list has not been completed it is certain that several noted speakers will address the convention upon the subject of good roads. The speakers who are assured are Joseph W. Hunter, State highway commissioner of Pennsylvania; W. E. McClintock, State highway commissioner of Massachusetts; and Frederick Skene, State engineer of New York. It is expected also that Governors Hughes of New York, Harris of Ohio, and Stuart of Pennsylvania will deliver speeches.

Mayor J. N. Adams of Buffalo will formally present the key of the city to the visiting automobilists on Tuesday, the 7th. The first session will be devoted to a discussion on Uniform Automobile Legislation, and will be under the direction of Charles Thaddeus Terry, chairman of the legislative board of the American Automobile Association. The afternoon will be given over to a discussion on Good Roads, under the direction of Chairman Hooper of the good roads board of the national organization. In the evening the delegates will be entertained at one of the local theaters.

Wednesday morning will be devoted to a further discussion of the subjects relative to good roads and the afternoon will be taken up by a series of practical demonstrations by noted road builders on the maintenance and the preservation of the highways. A feature of this demonstration willbe the tests showing the best methods to be followed in preparing dustless roads. An automobile tour of inspection of the roads in construction in Buffalo will be included in the afternoon's program.

At the meeting on Tuesday last Alfred Reeves was appointed chairman of the publicity committee in charge of the convention. George C. Diehl of Buffalo was appointed chairman of the committee on practical demonstrations on roads.

SPECIAL BODY FOR FIRE CHIEF

Pierce Favors St. Paul by Departure from Stock Model—Conveniences Provided for Head Fire Fighter.

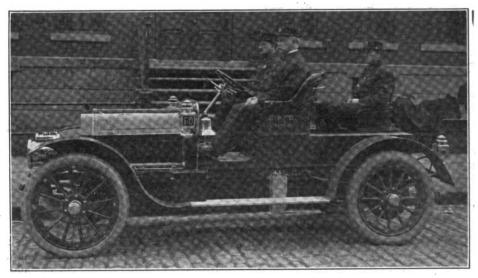
Following the example set by many cities St. Paul, Minn., has furnished the chief of its fire department with a motor car—a 45 horsepower Great Arrow, which was bought from the St. Paul agents of the George N. Pierce Co., of Buffalo, N. Y.

While the makers of the Great Arrow have done practically nothing in the past in the line of designing special bodies, they have made a notable exception to their rule

town unless the tax per diem is paid, but it is not thought that it will be enforced except in the case of the stage line's cars.

Automobile Apparatus for Fire Brigade.

As a result of something like two years of experimental service, in which both steam and electric machines have been employed, Herr Reichel, chief of the Berlin fire brigade, has decided upon a permanent equipment of electrics for service in the inner districts of the city, and of steam cars for the suburban regions. The test, for which an appropriation of about \$12,500 was secured, has been most thorough. The electric machine under test averaged two trips drily, frequently running as much as 22 to 25 miles outside the city. During the month



ST. PAUL FIRE CHIEF IN HIS PIERCE GREAT-ARROW.

in this case, as the accompanying illustration of the St. Paul fire department's car serves to show. While the chassis is of the standard model, the body has been designed to fulfil the requirements of a fire chief. The rear seat is of the disappearing type, and the rear under-body is arranged to furnish storage for the boots, helmet and other paraphernalia of the fire fighter.

Ohio Town Bars Automobile Stages.

Commercialism clashed with progress and set the 500 inhabitants of Jackson Center, Ohio, to talking when a local merchant succeeded in pushing through the council an ordinance which practically bars all automobiles from the town. The ordinance provides that automobiles shall pay \$1 a day for use of the streets, and owners shall be fined from \$5 to \$25 for each refusal to pay this tax. An automobile stage line from Jackson Center to Wapakoneta became so popular a local dealer complained it was taking trade from him. The ordinance was the inspiration of his perplexity. Council's move was promptly met by the stage line announcing that it would run its cars only to the town limits of Jackson Center. The ordinance however is worded so that it bars all automobiles from the of July, 1907, no less than 611 miles were covered; this being about the average mileage of a horse-drawn fire-engine during an entire year.

Automobile Serves as a Traveling Chapel.

While the automobile as an agent for evangelical purposes is not new, there is, however, a smack of novelty in the large sight-seeing car that has been utilized as both a traveling chapel and an advertisement for a Philadelphia church. Every evening the car is filled with 30 gospel singers, accompanied by a trombone playera cornetist and a minister, at the corner of Broad and Arch streets, and proceeds on a tour. Five stops are made en route when the choir sings and the minister makes a brief exhortation. Two large signs, announcing a "surprising Southern singer" and telling of a "wonder pianist" are prominently displayed on the sides of the car.

Kaiser Wilhelm Giving up His Horses.

Motor cars are growing in the favor of Emperor William, of Germany, to such an extent that he recently sold a number of his horses and has created a special automobile department in the Imperial stables. Already the Kaiser has nineteen machines,

GERMANY SHOWS RAPID GROWTH

Big Increase in Number Both of Pleasure Cars and Commercial Vehicles—Nearly Doubled in Bavaria.

During the year 1907, the use of motor vehicles in the German Empire increased something like 33 per cent. over that of the year previous, according to Consul General Nicolas Ifft, of Annaburg. By the official statistics, recently published, the whole number of vehicles in use on January 1, 1908, was stated to be 36,022. Of these, 34, 244 were designed for passenger transportation, and 1,778 for freight. Somewhat more than half of those rated as passenger vehicles, however, were motorcycles.

The increase was much larger, proportionally, in South Germany than in North Germany, being but 17.2 per cent. in Prussia as against 84.8 per cent. in Bavaria and 148.1 per cent. in Hesse. In the city of Berlin the increase in the number of motor vehicles for the year was only 6, or 0.2 per cent. Of the passenger vehicles, 14.046 were used for business or professional purposes and 13,771 as pleasure and sporting vehicles. During the year 5,686 motor vehicles passed the frontier for temporary use for touring purposes in the Empire.

That close system which is such a characteristic Teutonic asset, is revealed in the coupling of close figures as to motor accidents, with the number of vehicles in use. For instance, during the period of one year, in the province of Brandenburg, the ratio of accidents to machines was about 1 to 2, while in the Rhineland, there was only one accident to every 20 machines. In 95.5 per cent. of the whole number of 4,864 accidents recorded, the owner of the vehicle causing the accident was identified, and in 1,406 cases, punishment was meted to offenders.

Rambler Aims to Interest Doctors.

"There are two classes of automobile buyers," says the Rambler Magazine, editorially. "One class always buys a product that is either of unreasonable cost or very cheap in price. The other class always demands proof of worth, and that is the only true measure of cost." It is to the latter class that the efforts of Thomas B. Jeffery & Co. are being most strongly directed, and especially for the benefit of a strong contingent of that class, the "Physician's Number" of the magazine has just been issued. It is packed from cover to cover with relations of the experiences of a great number of owners who have employed their cars professionally, and found the service to be of advantage in their work. The contents carry conviction, and as the edition is to be distributed to 50,000 prospective owners, it is easy to imagine it may prove a remunerative as well as an interesting effort of publicity.



TWO VALVES COMBINED IN ONE

New Foreign Motor with Novel Form of Valve Gear—Original Method for Securing Double Service.

Although there are many advantages connected with the use of the independent poppet valves which commonly are used in gas engine practice, it is evident that where it is possible to combine the functions of both the inlet and exhaust organs in one moving part, considerable advantage is likely to be gained, particularly if the combination be possible to effect without loss of efficiency, mechanical or thermal. In the telescopic valves which are featured in the construction of the Franklin motors this year, a very close approximation to this desideratum is obtained by the use of two concentric valves. A recent foreign design which accomplishes the distribution with the use of only one moving part, however, and which, for its specific purpose appears to be wholly practicable, is the valve gear employed on the R. E. P. motors, which have contributed to no small stir in the aeronautical world abroad.

The most striking feature of these motors, aside from their very light weight, and high ratio of power to weight, is the fact that they are built in V-formation, and of 5 and 7 cylinders, according to the power requirements of the flying machine they are to serve. Because of the rigorous demand for economy of metal in their construction, the use of the one-piece, double-service valves, is particularly noteworthy.

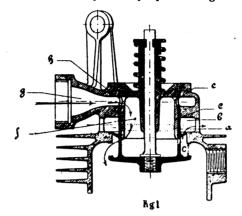
From the accompanying figures some idea of the method by which the double duty is secured, may be obtained. In Fig. 1, the valve is shown in the inlet position. It will be seen that its diameter is relatively large as compared with the cylinder bore, and that the casing or chest in which it works comprises two chambers separated by a horizontal wall, the upper being the intake, and the lower, the exhaust passages, respectively. The cap closing the central portion of the chamber, and also supplying the guide for the valve stem, is made with a depending sleeve, which comes down nearly to the level of the top of the combustion chamber, and is separated from the walls of the central chamber by a space just sufficient to admit the sleeve, which is the main characteristic of the valve itself.

The valve, which is made with independent head and stem, is composed of the sleeves mentioned, and a couple of flanges, the lower of which forms the valve proper and secures the intermittent closure of the combustion space. The sleeve is pierced by two sets of small circular ports, the upper row of which afford communication between the interior of the valve and the intake port. The lower row connects the interior with the combustion chamber simultaneous-

THE MOTOR WORLD

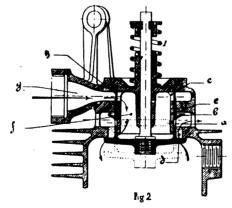
ly. The upper flange serves to exclude the entering gases from the exhaust port during the period of admission.

In the inlet position, as shown, the gases enter through the usual manifold connection at g, passing through the ports, h, to the interior, f, of the valve. Thence they pass downward as indicated by the arrows, and enter the cylinder proper through the



ports, c. During this interval, the flange, b, is seated in the cylinder opening surrounding the principal port, thus excluding the gases from the port, s, which surrounds the cylinder head and gives outlet to the exhaust through a series of small circular ports. In this connection, the construction of the valve sleeve and the closing cap, c, with its depending sleeve forming the valve seat or guide, is plainly shown.

At the end of the intake period, the valve is permitted to close to the full length of its travel, when the head, d, rises into its seat in the cylinder head, sealing the combustion chamber, as in Fig. 2. The openings in the lower part of the valve sleeve now register with the blank wall of the



lower portion of the cap, e. while the ports, h, in its upper portion, are sealed by the same member. For the exhaust stroke, a slight motion of the valve, opens communication between the cylinder and the atmosphere through the large circumferential port, but excludes the fresh intake gases by reason of the registry of the ports in the lower part of the valve, with the lower part of the sleeve. The intake relation is again established by the complete motion of the valve to the lower end of its travel.

From this it will appear that the valve

gear required may be essentially simple, the motion necessary for both intake and exhaust being merely the direct thrust common to all poppet valves, with the modification required to cause a dwell of one stroke in mid-travel. The principal advantages are that the combustion chamber is left perfectly plain, making possible a high compression, a simple casting, and a clean-working engine; that the exhaust gases have a free release and a short path to the atmosphere, in this case without the intermediary of an exhaust manifold or muffler; and that the passage of the live gases through the interior of the valve has a cooling effect upon it, as a result of which the cylindrical construction, with its considerable bearing area, is made possible. For the motor of larger size and more arduous service, it may be questioned whether such an arrangement would be entirely practicable. At the same time the suggestiveness of the system makes it well worth consideration with regard to its possible availability.

Waterproof Slip Covers for Cushions.

Slip covers for protecting the upholstery are an important adjunct to the car which is to be kept in good order internally, even though subjected to severe road wear. It is necessary that these coverings be of the right sort, however, if sufficient use is to be obtained from them to repay their cost. They must be cut to the exact shape and size of the cushions they protect, and they must be so contrived that they will go on easily, and without danger of stretching or tearing. The material should be reinforced with patches under each fastener, and the fasteners themselves should be not too bulky and of a secure type. For binding the seams, enameled binding leather is more suitable than any other sort, and further, possesses the advantage of helping to keep the material in shape. The goods employed for the purpose, should, of course, be of a serviceable, water proof variety.

Adaptability of Steel Belt Transmission.

Although the use of belt drive for motor car transmissions has entirely disappeared except in the case of one or two light vehicles at present manufactured abroad, it is possible that recent developments in the use of steel belting for transmission purposes in power plants may cast a new light on the matter. As a result of a series of exhaustive trials by a German firm, it has been found practicable to use steel for belting purposes with a remarkable degree of economy. It is stated that on account of the solidity and lightness of the metal, a belt of 1-6 the width of the common leather belt and of considerably less weight may be used. As it can be given considerable tension, the distance between the driving and driven members may be rigidly fixed, while centrifugal force and its effects are reduced to a minimum. The total power loss is claimed to be not over 1 per cent., while the slip is less than 1-10 of 1 per cent.

APPEAL OF THE MOTOR BUGGY

How the Country Physician "Doped It Out" for Himself—Then He Got an Unpremeditated Demonstration.

How great is the attraction which the motor buggy holds for the man whose need of personal transportation over the highway is imperative, is not generally appreciated by those whose motoring experience is drawn solely from contact with the more elaborate and conventional types of vehicle. That it is based upon logical conclusions, must be evident from the very type of owner and prospective owner to whom this class of machine most appeals. In other words, to the man who requires a certain number of vehicle miles at the lowest possible cost, and whose use of the vehicle is to be largely a business one, the motor buggy appeals, simply because of its lack of superfluous details in any way, and its practical appearance. A valid consideration in this connection, which also carries great weight, is the fact that it is designed for a solid tire mounting.

Not infrequently it happens that interest in this type is developed in unexpected quarters. The experience of a local agent for a well known make of high wheeled machine is an interesting case in point. He was driving his demonstrating car on a 25 miles trip to a neighboring city. As he passed through a small town on his way, he noticed be was being closely watched by a man of studious aspect, who was standing by the curbstone beside a medium-powered runabout of conventional design. Looking back a few moments later, he was surprised to note that the same man had got into his car and was following only a short distance behind him.

'As the road was clear and in good condition, I 'let her out' pretty well," says the agent in question, "and though I knew about what the other machine would do, I was not altogether surprised that it did not pass me, even when it came up close behind once or twice. Finally, on a long down grade, it shot ahead, and I had expected not to see it again, when, much to my surprise, I found it waiting by the roadside in a village just at the foot of the hill, with its owner standing in the middle of the road and 'flagging me.' At first I was disposed to question his purpose, and had visions of local bailiffs and other unpleasant rural factors. But his first words checked all doubts on that score, without, however, enlightening me as to his pur-

"'Are you in much of a hurry?' was his question when I stopped beside him.

"'No,' I said, 'not much.'

"'Because if you are not, I want to talk to you just a minute.'

"So I told him 'talking' was part of my

business, and if there was anything in reason he wanted to talk about, I would be glad to accommodate him.

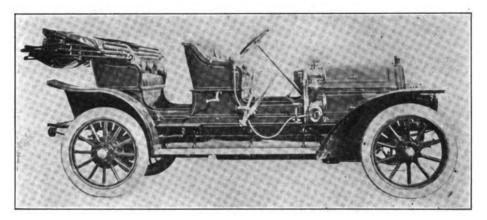
"Well, sir, it turned out he was a doctor, and lived back there in that little town, where he had a pretty wide-spread practice. Some two or three years back he had bought his machine, and was using it right along. But he had become interested in the high wheel proposition recently, and was anxious to talk it over with someone who knew all about it. So I told him I was just the man he wanted to see.

"It seems he had followed me all along just for the sake of observing how the buggy worked on country roads, and having stolen a demonstration as you might say, in this way, he was ready now to talk upkeep and all that sort of thing. He had no complaint against his own machine in any particular

DOUBLE RUMBLE WITH A TOP

The Thomas Tourabout a Compromise Between Runabout and Touring Car— Features of Its Adaptability.

In the development of automobiles the tendency of the times lies more in the line of refinement and simplification of body design than it does in alteration of the power plant. Probably the most striking change that is manifest in the outward appearance of a motor car is seen in the development of the rumble seat, which within the past year has attained a large degree of popularity. As the idea of the rumble found favor, the manufacturers of cars with this feature extended its scope by designing it



THE THOMAS TOURABOUT

way, he told me, but at the same time he had come to the conclusion that it was not just what he wanted.

"'The great trouble is,' he said, 'that when I get a call in the middle of the night, I have got to waste time in pumping tires. This don't happen all the time, but it happens often enough to make me average just about as much time in getting away from the barn as though I had to stop and harness a horse. Then, too, there are times when a little more road clearance would add materially to my average speed.'

"More than that, he said he was using more car than he needed. He was sure there was more machinery and more weight to be handled, and consequently more expense in connection with its use, than was really necessary. He had about decided that the high wheel proposition was what he wanted to tackle, but he had had some doubts as to the way the high wheels would work on the road, and as to how much speed could be made without shaking the rig to pieces. That chase behind me had settled his opinion.

"And this, mind you," concludes the dealer, "from a man who has driven an ordinary light runabout for a good many thousand miles, and sober miles at that, and who had 'doped' out his conclusion without any help from anybody else."

for the use of two persons instead of one, and following the line of development still further, the next step was in the arrangement of a top for cars so equipped. With the addition of the top the development of this type of car seems to be complete. The rumble back differs from the touring body mainly in the absence of doors and in the lighter construction which is made possible because of this elimination.

The latest car of the double rumble type is a very attractive model made by the E. R. Thomas Detroit Co. This car, which has been named the Tourabout, combines the lightness and speed of the Thomas runabout with almost the carrying capacity of a touring car, as shown in the accompanying illustration. A feature of this latest Thomas model is the ease with which the rear seat can be removed and a single rumble, or a trunk substituted.

The power plant consists of a standard Thomas-Detroit Forty motor, of the four-cylinder vertical type, with cylinders of 5 by 4¾ inches dimensions, and three-speed, selective, shaft transmission. Timken roller and Hess-Bright ball bearings are used throughout except in the crank journals and on the connecting rods, where die pressed tin babbit bearings are utilized.

The Tourabout weighs about 2.400 pounds and is flexible and easy to control.



RAN SECOND TO RIDERLESS HORSE

Automobilist Sued for Damages Nine
Months After a Nine Miles Heat—
Two Stories of the "Race."

A nine miles heat, said to have been made between Jeffersonville and Utica, Ky., in from 35 to 40 minutes, between an ordinary farm horse of mature years, and, as the complaint refers to it, an "Auto-Mobile," was the subject of a trial that has occupied considerable time of a jury in the Clark Circuit Court at Jeffersonville, Ky. The plaintiff was Fletcher Bushfield, a Utica township farmer, and the defendant, Charles C. Peel, who conducts a bicycle and automobile repair shop in Jeffersonville.

Peel owns a large car in which he frequently takes his family out for pleasure trips. One of these was made to Charlestown on April 27, 1907, and on the return voyage he "flushed" a horse belonging to Bushfield. The animal did not take kindly to the vehicle and with head and tail erect, started down the pike for Jeffersonville, nine miles distant. The race was an exciting one and along the line the people were notified by telephone of the novel contest. Many went out to see the race, but none attempted to stop the steed that persisted in keeping in front of Peel's machine. The horse finally ran into a Jeffersonville livery stable, still ahead of the automobile, having covered the nine miles, as alleged, in about forty minutes.

It was not until January 11, 1908, that Bushfield filed suit for \$125 as damages, the full price of the horse. In his complaint, he alleged the horse was on a public highway when Peel came along in a large, powerful and rapid-geared "Auto-Mobile." causing the animal to take fright and run down the pike. It was alleged Peel made no attempt to stop the machine, but continued to chase the horse. By reason of the long run it was alleged the horse was made sick, sore, "staved up," rendered unfit for service and damaged in the sum of \$100, judgment for \$125, the true value of the horse being asked.

Some of the testimony was interesting, but the witnesses varied on the time the race took place. Some said it was 4 o'clock in the afternoon, while others fixed the hour at 6 o'clock. All of the witnesses for the plaintiff said the machine was "goins some"; so was the horse in keeping ahead of it. One witness testified that she had been notified of the coming of the horse and machine and went out to see the race. She said she would not make an attempt to stop the horse through fear she might be run over by the automobile on account of it going so fast.

When Peel was put on the stand he said he was delayed by the horse until an hour was consumed in making the trip. He said the beast would not turn to the right or left and that when the machine was slowed down to give the animal a chance to leave the road, he would not do so, but persisted in jogging along in front of the automobile. He said he used every possible endeavor to get the beast to leave the road, but he would not do so.

Automobiles Serve as Political Rostrums.

While automobiles long have been used by political candidates and spellbinders during the campaigns, the use largely has been confined to the service of transportation. Occasionally the motor car has been utilized as a platform from which to address gatherings, but it remained for Winston Churchill to discover the value of the top of a limousine as a point of vantage from which to appeal to his hearers for their support. During his recent campaign for a seat in Parliament, Churchill hurried from place to place in a car equipped with a limousine body. Instead of engaging halls in which to address the voters. Churchill pulled up at convenient street corners and mounting to the roof of the limousine, made his speeches from a decidedly advantageous standpoint.

Chicago politicians have gone even farther by equipping machines with speakers' platforms, for street metings. Four cars thus equipped convey Republican campaigners from point to point, the arrival at a speaking site being heralded with bugles and red fire.

Organized to Fight the Jersey Law.

In accordance with the determination to fight the amended Frelinghuysen law a committee representing the associated automobile clubs of New Jersey will make its first attack on the constitutionality of the license clause. The committee was appointed at a meeting of the Associated Clubs held May 7, at the New Jersey Automobile and Motor Club, Newark. W. C. Crosby, of that city, is chairman of the committee, which is authorized to secure counsel and begin proceedings at once. Sufficient funds have been assured by the different clubs that are affiliated with the State body and the best legal talent that is available will be secured. President George Paddock, of the New Jersey Automobile Trade Association, was present at the meting and assured the State body that the dealers would co-operate with the automobile clubs in the proposed fight.

Proposes High Tax on "Rubbernecks."

Running sight seeing automobiles will come high in Buffalo if the Doull ordinance providing for the licensing of them passes. The aldermanic law committee is expected to report favorably on the ordinance. It provides that companies operating such vehicles must maintain waiting rooms for passengers, and must not allow the sidewalks to be used for that purpose. The fee per year is based on the seating capacity—\$1 per seat.

WOULE-BE PURCHASER IS SOLD

Bargain Car all Right in Down Hill Demonstration—Then Seller Gets Away with Cash Deposit.

Convinced that he was the one that was sold, and not the automobile that he bought, Frederick B. Drury, of Barre, Vt., made complaint to the Boston Police which had the effect of landing in the toils a young man named Paul C. Hersey of 3 Copeland street, Roxbury. The charge against Hersey, is specifically, larceny of \$200.

Drury, it seems, thought he ought to have an automobile, and when he saw an advertisment that struck him as being a pretty good bargain, in he came to Boston to put through the deal. The bargain proved to be more than he bargained for. It took him to 18 Lynde street, in the West End, where he met young Hersey, and the machine. All three started out on a trial spin, after Drury had planked down the \$200 as evidence of good faith. His own good faith seemed to be the only faithful part of the deal.

The machine went through its initial paces in right good style. It shot down the hill leading to Cambridge like a thoroughbred that had been cooped up in a stall for a week. When it struck the level, however, the car stopped, but Drury had no suspicion that all was not "on the level," even when Hersey requested him to stand by the machine until he, and his operator could return for some repair tools.

"You wait here until I return," said Hersey; but fortunately for Drury, he did not obey orders to the letter, else he might have been waiting yet, for that was last Tuesday and so far as is known Hersey had not returned up to Sunday morning. Neither had he returned the \$200. Drury waited as long as he thought he ought to then he concluded that he ought to report the automobile deal to the police.

Chicago Club to Aid Law Enforcement.

Good roads and the subject of scorching were thoroughly discussed by the board of governors of the Chicago Automobile Club at their regular meeting held May 8, and it was voted that Claude Seymour, A. R. Stumer, and T. J. Hyman should represent the club at the two days' convention to be held in Buffalo, N. Y. Discussion of scorching brought about a resolution which converts the club into a committee of the whole, each member being appointed a monitor to report cases of reckless driving to the board, which in turn will present the facts to Chief Shippy. It is noted, however. that the board makes a distinction between fast and reckless driving, the resolution defining reckless driving as "driving under conditions such as jeopardizes life, limb or property."



EVOLUTION OF THE ELECTRIC

Churchward on the Advance in Motive
Power Transmission and Control—
The Reduction of "Wattage."

During the last two or three years, while the gasolene vehicle has been making tremendous headway and gaining rapidly in the popular estimation, the electric vehicle has persued a course which has been marked by nothing quite so much as by its even tenor. Because electrics have become wholly practical, and are operated with none of the formality which the highly paid attendant has impressed upon the average owner as being requisite to the other, development has been accomplished with but scant attention on the part of those not directly connected with its production. The factors which have characterized this progress are briefly summarized by Alexander Churchward, whose connection with this branch of the industry has been intimate and of long duration; who also presents some valuable figures on the "wattage" of the present day vehicle, and the considerations which lead to its economy.

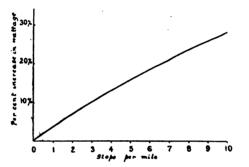
Nearly all of the earlier vehicles of the larger sizes were driven by motors mounted on the rear axle, the method of transmission being usually of the single reduction spur gear type, says Mr. Churchward. In the smaller sizes, such as runabouts, live axles with differentials and single motors were used. In the larger sizes two motors and dead rear axles were used.

The method of control adopted in these earlier types was what is known as the "commutated battery system," the controller changing the connections of various sets of cells from parallel to series, thereby varying the speed of the vehicle by varying the electro motive force impressed on the motor. The main advantage of this method of control was the unequal discharge of the different battery sets when connected in multiple. The mileage of these earlier vehicles was quite low compared with the results obtained from the same size battery to-day, the reason being that the friction, or in other words the "wattage," was excessively high.

It has been shown that motors mounted directly on the rear axle, are necessarily slow speed, comparatively heavy, the efficiency on overloads not high, and the transmission under average conditions not very efficient.

Next in order came the double reduction motor mounted on or suspended from the body of the vehicle, the power being transmitted from the motor countershaft or, in some cases, where slow speed, single reduction motors were used, from the motor shaft to the rear wheels by means of chains and sprockets. The vehicle efficiency of this type of transmission was found to be higher than the direct spur geared type, due to the increased flexibility in the directing mechanism, less weight on driving axle, better distribution of total weight, and the use of a lighter, higher-speed, and more efficient motor.

In 1903 one company placed on the market a new and lighter type of commercial vehicle, the principle features being: Net weight, approximately 0.6 of that of any vehicle of similar carrying capacity; flexible armored wood frame; single motor, roller chain drive from motor to countershaft; double chain drive from countershaft to rear wheels. Although this vehicle in the smaller sizes was capable of carrying nearly its own weight, it was found to be efficient and satisfactory in service. This was due to the great flexibility of the running gear and transmission. Such was the suc-



cess of this type of vehicle that it proved conclusively that the weight could be reduced considerably in all types of electric vehicles, without impairing the efficiency or increasing the cost of maintenance.

Following along these lines, nearly all the standard vehicles to-day, with the exception of some few makes of the heaviest trucks, are equipped with a single motor and double chain reduction, but great improvements have been made by different manufacturers on this single motor type of vehicle. The first reduction roller chain has been replaced by a silent chain-the efficiency of the silent chain at high speeds being much greater than the roller chains. The plain bearings in the wheels are being replaced by some type of roller or ball bearing. Pressed steel frames for the smaller size vehicles and steel channel frames in the larger sizes are so designed as to retain the necessary flexibility and strength without increasing the weight.

Great strides have been made also in the design of motors especially suited to this single motor construction, the efficiency be-

ing increased on normal and overloads many per cent, while all unnecessary weight has been removed without impairing the steep torque characteristics so essential to motors taking their energy from storage batteries.

Another important advance has been made in the design of the controlling apparatus, which has been modified to suit the new conditions. The standard practice today is not to commutate the battery, but to combine the field windings of the motors, with proper shunting and thus obtain a greater number of speeds at higher efficiency that formerly. On all the older types of vehicles the controller used, opened the circuit between controller points, the result being arcing or burning of contacts, and expensive wear and tear on gearing, motor and tires. But in 1904 the General Electric Co. brought on a new controller, which obviated all of these troubles, and increased the mileage, life of tires and batteries.

This controller was so designed that the motor circuit was not opened in any point from the first to the last, the torque on the motor never falling below a certain predetermined value. It is known as the "continuous torque controller" and is applicable to both single and double motor equipments.

Much study has been given by vehicle manufacturers to the reduction of friction or wattage of their vehicles. A few years ago a commercial vehicle consuming 120 watt hours per ton mile on hard level asphalt was considered successful, but lately this limit has been reduced below 100 watt hours per ton mile, and in some cases, under favorable conditions, as low as 60 watt hours per ton mile.

Although the wattage of a vehicle on hard level asphalt cannot be taken as a criterion of what the vehicle will do in actual commercial service, yet it serves as a basis from which all calculations of mileage and traction can be made. The number of stops per mile has a great influence on the wattage of a vehicle, and as the mileage of any vehicle, with a given battery, is approximately proportional to the wattage, therefore the number of stops to be made will directly affect the possible mileage. The increase of wattage in per cent. due to stops is shown in the accompanying diagram.

The wattage is also influenced by the type of tired used. With solid tires of different makes the free running wattage may vary 10 to 15 per cent. on hard level asphalt, but the differences becomes less apparent on

Watt Hours Per Ton Mile.

I ype of										
Battery.										
M V	50	60	<i>7</i> 0	80	90	100	110	120	130	150
			Ťo				our.		100	130
7	35	29	25	22	20	17.5	16	14.6	13.5	11.7
9	47	39	33	29	26	24	21.5	19.5	18	15.7
11	58	49	42	36	32	29	26.3	24.2	22.3	19.3
13	71	59	50	44	39	35	32	29.5	27	23.5
15	82	68	58	51	45	41	37	34	27 31.5	27
17	94	79	67	59	52	47	42.5	39	36	31.5
19	105	89	76	66	59	53	48	44	40	31.5 35
21	122	102	88	76	68	61	55	51	47	41
									•••	

volts:

duced.

standard design:

Level asphalt 57

Level macadam....

5 stops per mile.. \\
Level macadam.. \

5 stops per mile.. }

10 stops per mile. \

evel macadam..}

Level asphalt...

grades or rough roads. How necessary it

is to reduce the wattage per ton mile, of all

vehicles that derive their energy from stor-

age batteries is shown in the accompanying

table, which gives the ton miles per hour

capacity of a 44-cell battery at a 4-hour rate

and with an average pressure per cell of 1.9

It will be seen from this that if a vehicle

takes 120 watt hours per ton mile with a

21 "MV" battery, the ton miles per hour

maximum are 51, while if the wattage is

decreased to 50 watt hours per ton mile the

mileage is doubled, or a much smaller bat-

tery, 11 or 13 "MV" can be used for the

same distance to be covered. Thus by re-

ducing the friction or wattage of a vehicle,

a smaller battery can be used, a smaller motor, and the whole vehicle weight can be re-

The effect of different pavement and running conditions on this factor is further

shown by a second table, giving the results

of tests on a 1,000-pound delivery wagon of

Max.

Miles

Per

47.5

49

44

41.6

Charge.

Watt Vehicle

Hours Speed Per Ton MPH

95

93

110

103

122

110

120

109

Mile. (Max.)

10.5

10

10.5

10

10.5

10.2

9.9

10.2

:10

THE MOTOR WORLD

REFINEMENT IN THE CONE CLUTCH

Light and Compact Construction of New "Long Arm" Model-Special Features in Conventional Design.

There is a certain comforting assurance of probable reliability in the use of any adjunct to the car which is known to have been designed along correct theoretical lines, and constructed in accordance with the best conditions of modern practice. On this account the work of the parts specialist may be accounted of especial value, since every article placed on the market is pro-

10 stops per mile.. 37.5 Asphalt 1 % grade. 41.5 Macadam 1 % 38 N. Y. City average 3 5 stops per mile.. 3 On pleasure vehicles some form of pneumatic tire is nearly always used, and there is even a greater variation with different makes of pneumatics, than with solid tires. A vehicle equipped with a single tube cord tire will have a radius of nearly double that obtainable when equipped with a standard double tube tire. Several of the tire companies have designed a special fast low wattage tire, of double tube construction, for use on electric carriages, but, although the radius of action is nearly that of the single tube cord tire, the liability to puncture is as great.

There has therefore been the choice between long mileage (per charge) and the liability to puncture and its attendant dangers, and short mileage and the comparative safety of a stronger tire. Lately a nonpuncturable inner tube has been brought out, and has been thoroughly tested. If this is used in conjunction with a special low wattage outer casing, we then arrive at the possibility of long mileage (per charge of battery) with a comparative safety and low tire maintenance.

From tests lately made, it would appear that the combination of this inner tube and a fast outer casing, does not increase the wattage perceptibly over that of the same casing and an ordinary inner tube.

duced as a specific and not as an incidental effort. An instance in point is the "1909" model cone clutch, which has just been produced in early anticipation of the market by the "Long Arm" System Co., Cleveland, O. It is a compact and very light form of the conventional design. Yet being a special product, there can be no question about accepting it as a trustworthy component of the car.

In detail, the new clutch is much like the previous model. Its features include the large diameter and light, skeleton cone, with its standard angle of 10 degrees, its cork inserts, and friction material of a special grade of leather; its long center bearing, which prevents disalignment and consequent uneven engagement; and its variable tension device, which consists of a split, threaded bushing, which is locked by means of an expander bolt, when properly adjusted. The spring is of liberal size and enclosed, yet readily accessible for adjustment, and one fork of the universal joint is made integral with the driving sleeve, while the transmission is through a dropforged center cross which is furnished with the clutch. Disengagement is secured through the use of hardened rollers, for

which lubrication is provided, and in all other respects the main object of securing a high ratio of power capacity to weight and bulk have been subordinated to conditions governing efficiency of performance. The general arrangement is shown by the accompanying illustration, in which the construction is self-evident. Alterations in diameter, angle and friction surface will be made to specification on large orders.

The Principles of Valve Timing.

To the average motorist the mysteries of valve timing are of no particular interest. At the same time it is well for him to understand the principles upon which it is based, as well as the purely mechanical process by which it is accomplished, sufficiently well to be able to cope with the problem all by himself, should occasion require. In this connection, the most difficult point to understand is why the opening of the exhaust should be advanced, and its closing retarded. Considering the relative rate of piston travel at different points in the stroke, however, there is no real difficulty in understanding even this, as a foreign expert lucidly explains.

"Starting with the commencement of the suction stroke," he remarks, "it is obvious that there is very little downward movement of the piston at the commencement of the revolution of the crankshaft. Therefore, no suction can be set up until the crankshaft has gone through a certain angle (about 10 degrees). Thus it is of no use opening the inlet valve until 10 degrees past the dead center. Similarly no compression can take place until about 10 degrees past the bottom dead center, but the charge from the carburetter has been sucked in at high velocity, and therefore can keep flowing in under its momentum during that period when the piston is practically stationary at the bottom dead center. This accounts for the advantage to be obtained from the late opening and closing of the valves. The early opening of the exhaust valve has been often explained, but its late closing is not so apparent. As there is no longitudinal movement of the piston until 10 degrees after the dead center, and as the inlet valve is not opened until that point is reached, it is generally beneficial to keep the exhaust valve open until the piston starts moving down, so that the exhaust gases, which are under pressure, can be given every chance of escaping."

Naptha for Cleaning Upholstery.

Naptha may be used for cleaning the upholstery of the car when very dirty or greasy. If soiled only slightly equal parts of alcohol or salt and naptha should be used. The proportion should be such that when dissolved the mixture will feel gritty between the fingers. To use this, dampen the material with a sponge and brush over the dampened surface. The soiled spots will disappear and the material change to a fresh look.

NEW YORK'S NEWEST MOTOR CAB

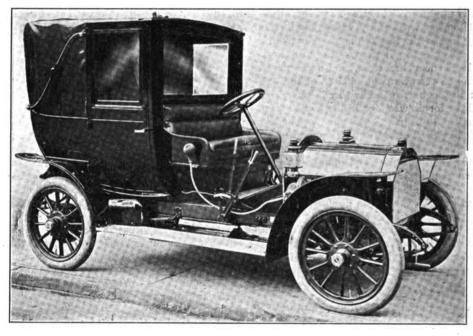
Characteristics of American Locomotive
Model Adopted for "De Luxe" Hotel
Service—Some Original Features.

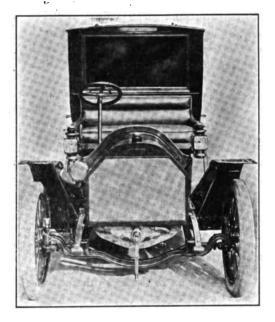
Probably the non-mechanical New Yorker has learned before this that the various types of motor cab now plying the streets of his city in taximeter service may be identified by their color, and has therefore assumed an air of great wisdom by his ready ability to name off the maker of any one of the several sorts now in service. To such

limited by a governor to a rate of 800 revolutions per minute, that the spark regulation is fixed in so far as the operator is concerned, and that the machine is geared to a maximum vehicle speed on direct drive of but 20 miles per hour. The automatic limitation of the engine speed precludes the possibility of any "racing" beyond this rate, either in motor or vehicle.

Interchangeability, which has been mentioned as a distinguishing feature, is conserved by the use of front and rear axle, motor, transmission and steering groups, which may be replaced individually as required, without special fitting or alignment. In most cases, also, this may be done with-

consisting of a large central ring, with tubular extensions at either end which form the housings and supports for the driving stubs. These extensions are ribbed to the central member in such a way as to secure the most desirable distribution of metal at every section. The spring seat and brake anchors are rotatively mounted in this member, their torques thus being transmitted directly to the frame members. The rear end of the driving shaft is carried in a housing affixed to the central body of the axle, and terminating in a torsion tube, which is attached to the chassis by a rotating yoke. The latter, by its method of attachment carries only torsional stresses,





SIDE AND FRONT VIEWS OF THE AMERICAN LOCOMOTIVE MOTOR CAB

a one, some little confusion is likely to result from the appearance of yet another color scheme on the streets, namely that of a dark brown body and yellow running gear. His anxiety may be set at rest quickly, however, by the statement that vehicles answering to this description are the very latest product of the American Locomotive Automobile Co.; that it is built in Providence, R. I.; and that the first hundred of the type are now being put into service, the initial instalment having gone into use last week at the Waldorf-Astoria llotel.

For those who desire to go beneath the paint in learning to discriminate between machines of different makes but of the same general class, considerable originality will be found in the machine in question. It is built exclusively for cab service, and with this in view such points as facilitate interchangeability, prolong the life of the parts, and make the replacement of parts a matter of minutes rather than hours, have been given especial attention.

One of the most striking points in this connection is found in the fact that the motor, which is of the slow speed type, is

out dismounting either of the other organs from the chassis, or even disturbing them in their location.

The significant details of the vehicle are: motor, four-cylinder vertical; cylinder dimensions, 315-16 by 434 inches, bore and stroke; rated output, 16 horsepower; low tension ignition, with Simms-Bosch magneto; transmission, by multiple disc clutch, similar to those employed in the Berliet touring cars; three-speed, selective gearset, the third speed being direct, with a speed reduction of 3.8 to 1; shaft drive, and live rear axle; wheel base 103 inches; tread 55 inches, tires 32 by 3 inches, front and rear; height of frame from the ground, 24 inches; total vehicle weight, 2,600 pounds. Two sets of brakes are provided, as in all well ordered cars, the service set being of the contracting type, while the emergency equipment operates by expanding shoes against the interior of the same set of

The most original, and from the designer's point of view, the most interesting feature of the chassis, is the rear axle and its anchorage. The bridge, or supporting axle is comprised of a one-piece drop forging,

and allows the axle independent movement except in the radial sense, to which it is confined by the tube and also by a pair of radius rods which join the front side of the brake anchor with the frame, and which are articulated on the same transverse center of the chassis as the yoke supporting the torque tube. The live portion of the axle is of the true floating type, and the differential and bevel gearing is enclosed by a light housing attached to the axle, which carries no load. The wheels, of course, are carried on the ends of the axle tubes. An indication of the thoroughness and high class nature of the construction which is employed throughout, is found in the use of annular ball bearings on all journals of the transmission and running gear.

Like the chassis, the bodies are designed and built with special regard to the severe duty which is to be required of them. The woodwork is of seasoned ash, with sheet steel panels, the door mouldings and glass frame fences being of metal. The interior is trimmed with good vaneer, and the glass frames are of polished mahogany. The upholstery is of hand-buffed leather, and the door handles and other fixtures are of brass.

SOLITARY COP OPERATES THE TRAP

Pelham Manor's Short Stretch of Parkway
Costly to Motorists—How the System is Worked.

Because the village of Pelham Manor, just outside of New York City, purposes the erection of a new town building and "needs the money," automobilists passing through on Sundays are "trapped" with unfailing regularity on that portion of the Pelham Parkway lying within the village limits and the experience invariably costs them "\$25 per." At least that is the view taken of the matter by people conversant with the situation. The village controls about 400 feet of the parkway just beyond the Hunter's Point Inn, on the main road from New York to Boston, its jurisdiction commencing at the top of the first incline past the Hunter's Island Inn and indicated by a signboard on the right side of the road. This signboard has recently been changed in that the speed limit is now 12 miles an hour instead of 4, as hitherto. Almost opposite the signboard is a lamppost and from this lamp a course measuring 110 yards has been measured on the sidewalk by the Pelham police, the finishing mark being on a telephone pole on the right side of the road at the foot of the decline.

On Sundays and when traffic is heaviest one lone police officer is stationed about 200 feet beyond the finishing line and it is upon his judgment of the speed that arrests are made. There are no police at the commencement or the finish of the trap. The road curves at this point and a shorter and somewhat dangerous curve is just ahead as the Travers Island club house of the New York Athletic Club comes into view.

The trap is in operation every Sunday afternoon and occasionally in the morning. The automobilists are arrested and taken up into the woods about a mile, held in cash bail for \$25, and the trials generally are set for 6 o'clock on the succeeding Thursday evening.

In a recent trial where the evidence of the policeman was disputed the policeman swore that standing 530 feet from the starting point and 200 feet from the finishing point he could tell within six inches when the cars passed the imaginary line drawn at right angles to those points. The operator and his guest who was seated at his side both swore that their White steam car was going only 11 miles per hour by the speedometer that was in plain view of both, that they had slowed down upon seeing the sign previously referred to, that the power had been shut off and the footbrake set. The policeman, however, swore the car was going 25 miles an hour and that he had jumped on the running board while it was at that speed—a remarkable evidence of agility, if true. In spite of the facts offered in defense the usual fine of \$25 was imposed. It is stated that the measurement of the course has not been checked and that the cop on duty there has not even measured it himself.

Women Establish "Free Rest Room."

As the citizen of the Bowery would say, "pipe" this sentence, from the Palmer correspondent of the Boston Journal, balanced as neatly as any juggler on the Poli circuit ever manipulated twenty cigar boxes, three billiard balls, a piece of chalk and a lighted lamp on top of a billiard cue reposing on his nose: "Henceforth the fame of the town of Palmer will be cherished in the hearts of automobilists as a green, breezy, rippling oasis in a waste of inhospitable burgs with many sassy youngsters shying rocks at the tonneau. squawking hens, lallygagging it across the road exasperatingly near the tires, and farmers retreating in terror to the shelter of the garret at the request of a bevisored, begoggled chauffeur for a 'wet' for his 'whistle' from the well.

"Thanks to the Old Center Improvement Club, composed of ten of the most estimable women of Palmer and always alive to modern requirements, a free rest room for automobilists, the first in America, has been opened here. There is no doubt that it will be popular, for from one end of the summer to the other a continuous file of whizz-chug cars keeps Palmer mummified in dust like an old lost masterpiece of Dante, and there is a perpetual yell from the tourists for a yank at a faucet."

Abilene Claims the "Youngest Motorist."

Infant prodigies make their meteoric appearance in every walk of life, and claims to the title of "youngest motorist" are by no means uncommon The latest claimant for that title is Miss Bessie Coulson, who will round out six years of her life time in June next. She is the daughter of Councilman E. E. Coulson, of Abilene, Kan., and he has so much confidence in her ability to operate his two cylinder touring car that when he reaches home he permits her to take it from the curb, around the corner, where, unaided, she turns and backs it through a narrow door into the garage. She drives through the streets with great skill, her father being with her merely to see that no mishap occurs, and she can bring the car to a stop at the curb as neatly as an experienced chauffeur could do it.

May Attire Motorcycle Cops in Khaki.

Toledo may set the fashion for rational dress for motorcycle policemen by adopting khaki uniforms for the motorcycle squad. The question came before the board at its last meeting and olive drab was the color most favored, as being less likely to show dust and oil spots as quickly as blue uniforms. The new motorcycles required for the use of the squad also were ordered purchased.

NEW DOCTRINE OF RESPONSIBILITY

Astounding Decision by a French Legal Tribunal—Innocent Man Convicted of "Involuntary Homicide."

That a driver may be held responsible. for an accident caused by a vehicle following the one he is driving is the extraordinary legal doctrine set up in a recent decision of the Tribunal of Louviers, a French court. Under this decision a chauffeur named Pouget is adjudged guilty of "homicide through imprudence," and is under a sentence of one month's imprisonment and to pay a fine of 40 francs. The Touring Club de France has decided to appeal the case, which will be reheard before a higher court in Rouen. If such a decision should be allowed to stand, it is thought, the effect would be to make automobiling in France a matter of intolerable risk.

The case arose from an accident which occurred on August 20, 1907, when Pouget and another chauffeur named Fritz were taking to Dieppe two automobiles just purchased by Payne Whitney. When they reached the village of Pis Aller the car driven by Pouget was ahead and he successfully negotiated his way along a street encumbered by a grocer's handcart on the left in charge of a man, a two-horse wagon and a donkey cart on the right, and a dog in the middle of the roadway. Fritz, following Pouget at a distance of about 300 yards, ran over the dog, this accident throwing his automobile to the left, where it crushed the hand cart and killed the man attending it, while Fritz himself was thrown out of his seat, fell on his head and received injuries which resulted in his death that night in a local hospital.

At first an attempt was made to hold Payne Whitney responsible, but that failed and the authorities then proceeded against Pouget, accusing him of "homicide through imprudence," since he had led the way and was responsible for his comrade's attempting to follow. The Court of Louviers accepted this curious doctrine and declared that though Pouget was neither the author nor the accomplice in the death of the two victims, he was guilty of involuntary homicide in not protecting the grocer's man from the motor car following.

Home Made Automobile a "Scorcher."

A Sunday outing which Calvin Bangs of Everett and William Butler of Boston had planned to take in an automobile built by themselves and upon whose construction they had expended about \$800, was prevented by a copper boiler exploding and demolishing the machine. Butler was sitting in the seat at the time, while Bangs was "firing up." In a twinkling the \$800 and their labor "went to hell" as one of the men expressed it.

The Week's Patents.

880,958. Multiple Cylinder Engine. Frank X. Bachle and John C. L. Kress, Clyde, Ohio. Filed June 13, 1907. Serial No. 378,-691

1. A multiple cylinder engine having its cylinders provided with pumping and combustion chambers, said chambers each having a port communicating therewith, a crank shaft and a rotary valve geared to revolve with the engine crank shaft and having a gas supply chamber and a gas distributing chamber, said supply chamber having ports arranged to register at different points in a rotation of the valve with the ports leading to the pumping chambers of the cylinders, and said distributing chamber having two series of ports, one series of which registers with the pumping chamber ports at different points in a rotation of the valve while the other series registers with the combustion chamber ports at different points in a rotation of the valve.

881,026. Spring Cushion for Automobile Tires. John P. Parsons and William Fleming, Pittsburg, Pa. Filed July 6, 1907. Serial No. 382,518.

1. A cushion tire comprising an outer casing inclosing a split annular frame provided with a circumferential recess, resilient means positioned in said recess, an outer split frame supported on said resilient means, an annular cushion carried by said outer frame, and means positioned within said annular frame for expanding and contracting said tire, substantially as described.

881,040. Compressor for Internal Combustion Engines. Harry W. Adams, Fargo, N. D., assignor of one-half to Philip W. Farnham, Fargo, N. D. Filed July 11, 1905. Serial No. 269,154.

1. A compressor having an inlet valve, a conduit for the delivery of compressed fluid, an exhaust valve controlling said conduit, a coil spring for normally holding the inlet valve in its closed position, and a movable member having one surface thereof subjected to the pressure of the gas in said delivery conduit beyond said exhaust valve and for increasing the tension of the spring and increasing the resistance to the opening of the inlet valve as the pressure within said delivery conduit increases.

881,058. Gas Engine Igniter. Albert N. Classon, Rutland township, Lasalle county, Ill. Filed April 20, 1906. Serial No. 312, 800.

1. An ignition apparatus for internal combustion engines, comprising a magneto, an eccentric located upon the shaft of the armature thereof, a vibrator electrically connected to said magneto, binding posts oppositely disposed in the path of the vibrator, an eccentric rod connected to said eccentric and to said vibrator, and a condenser in parallel with said vibrator and binding posts, whereby the vibrator may be positively operated and an alternating current generated.

881,069. Engine Starter. Herbert P. Francis, Oroville, Cal. Filed April 20, 1906. Serial No. 312,806.

1. In an engine starter, the combination of a means for storing energy, a rotary shaft, means connecting it to the engine, a gear in connection with said means for storing energy, a gear in connection with the shaft, an independently rotatable member, a gear carried thereby, and means for arresting the movement of said independently rotatable member at will, said means being automatically controlled by the means for storing energy.

881,102. Anti-Friction Bearing. Walter C. Baker, Cleveland, Ohio., assignor to The American Ball Bearing Company, Cleveland, Ohio, a Corporation of Ohio. Filed April 2, 1906. Serial No. 309,387.

1. A wheel bearing and steering mechanism comprising balls, rollers, or other antifiction devices, one of said anti-friction devices being located within the wheel hub, and within the line of the tread thereof, the other of said anti-friction devices being located inwardly from said wheel, said antifriction devices being of different sizes, and the larger of said anti-friction devices being located in a line with the traction and tread of the wheel, and a steering knuckle located between the two bearings.

881,122. Speed Mechanism. Frederick H. Hodgkins, Chicago, Ill. Filed Aug. 25, 1905. Serial No. 275,035.

1. In a speed mechanism, the combination of a hollow shaft, a slidable shaft in said hollow shaft, a friction member mounted on the hollow shaft and locked to the slidable shaft, driving members mounted on the hollow shaft at the ends of the friction member, each of the driving members having a seat and the ends of the friction member being shaped to engage the seats on the driving members, means for actuating said driving members, means for adjusting said slidable shaft to shift the friction member into operative engagement with one or the other of said driving members, and yielding means to move the friction member out of operative engagement with the driving members.

881,147. Heat Radiating Device. Julian L. Perkins, Springfield, Mass. Filed June 5, 1907. Serial No. 377,351.

1. The combination with the cylinder of a revolving engine, of heat-radiating ribs spirally disposed around the cylinder whereby air is directed around the latter to the rear side thereof, when the engine is running.

881,214. Explosive Compound Engine. Ellis J. Woolf, Minneapalos, Minn., assignor to The Woolf Valve Gear Company, Minneapolis, Minn., a Corporation of Minnesota. Filed March 2, 1907. Serial No. 360,148.

1. A compound explosive engine having its high pressure pisson connected to travel in advance of the co-operating low pressure piston, and a charging chamber subject to compressing action of both of said pistons for forcing a charge into the explosion cylinder, substantially as described.

881,227. Anti-Vibration Device for Automobiles. Charles C. Dodge, Newark, N. J., assignor to The Dodge Lubricator Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 1, 1905. Serial No. 276,671.

1. An apparatus of the character referred to, comprising a cylinder, a support connected to the cylinder, means by which said support may be adjusted, a piston in the cylinder, bell-crank fulcrumed on said support and having relatively long and short arms, a piston rod, and means by which the cylinder and the short arms of the bell-cranks may be attached to two relatively movable parts of a vehicle.

881,248. Change Speed Gearing. Hubert Le Blon, Paris, France. Filed Jan. 31, 1907. Serial No. 355,044.

1. In combination, a driving member, high and low speed gears therefor, a driven member, a sleeve therefor loosely mounted

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

FOR SALE—Or exchange for touring car body, one 1907 Buick M. G. body complete. E. KEELER CO., Williamsport, Pa.

FOR SALE—1907 Pullman runabout or surrey, detachable rear seat, 4 cylinder, 30-35 H. P.; victoria top; Sprague's folding front. Five gas lamps and generator. All metal parts nickel plated. Tires, Goodrich, Bailey tread. Tires and car good as new; car run 900 miles. Reason for selling, have ordered new 6-cyl. Pullman. Car cost new \$3,000; price, \$1,250. Address Post Box 448, Harrisburg, Pa.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

F OR SALE—One new 1907 M. G. Buick runabout body complete. E. KEELER CO., Williamsport, Pa.

Wico Adjustable Spark Plug



WITHERBER IGNITER CO.,

1876 Broadway, New York

\$1.00

Each

One





THE METEOR 50.

The Car that does things

For Particulars, Address

METEOR MOTOR CAR CO., Bettendorf, la.

high and low speed gears for said sleeve communication with each mixing chamber meshing with said first mentioned gears and for the respective mixing tubes, and means provided with adjacent coupling members, an intermediate coupling member mounted on said sleeve, and means for shifting said sleeve to throw said intermediate coupling member into engagement with either of said loosely mounted gears.

881,273. Gearing. Charles Wicksteed, Kettering, England. Filed Aug. 9, 1906. Serial No. 329.937.

1. In speed gearing the combination of two clutches having a part movable axially into and out of engagement with its co-operating part, a rotatable operating shaft having two eccentric bodies thereon, means for operatively connecting one eccentric body with the axially movable part of one clutch in such manner that rotary movement of the shaft imparts axial movement to the clutch part, means for operatively connecting the second eccentric body with the axially movable part of the sec-ond clutch in such manner that rotary movement of the shaft produces axial movement of this second clutch part, substantially as set forth.

881,279. Carburetter for Internal Combustion Engines. Perry Allen, Flint, Mich. Filed May 31, 1907. Serial No. 376,533.

1. In a carburetter, a casing having an air passage provided with ports in both ends, a gate valve controlling the discharge port, a fuel supply pipe having a plurality of discharge ports facing the gate valve and under the control of said gate valve, a second valve controlling the quantity of second valve controlling the quantity of fuel passing into the supply pipe, and means for connecting the two valves for mutual movement.

881,419. Valve Stem and Tire Deflation Alarm. Abbott E. Kay, Chicago, Ill. Filed Aug. 3, 1906. Serial No. 329,271.

1. In a device of the class described the combination with an inner tube of a stem rigidly engaged thereto and having its inner end approximately flush with the tube, telescoping tubes, one rigidly engaged in the stem and insulated therefrom, the other slidable therein, spring contacts carried by the movable tube adapted to bear against the rigid tube to close a circuit.

881,416. Carburetter. Charles Krebs, Newark, N. J. Filed April 12, 1907. Serial No. 367,820.

1. In a carburetter for gas engines, the combination with a gasolene holder, of a series of mixing tubes, each tube forming a mixing chamber, a feed tube connected with said gasolene holder, said tube extending into and diametrically across each mixing tube, said tube being provided with a series of outlets, each outlet establishing a

connected with each mixing tube having a portion in engagement with the outlets in said feeding tube for regulating the spraying of the gasolene from said outlets, substantially as and for the purposes set forth.

881,428. Engine. Charles V. Martin, Charleston, W. Va. Filed Feb. 26, 1906. Serial No. 303,036.

1. In a rotary engine, the combination with supports, of a fixed crank shaft carried thereby, a casing having ported inlet and exhaust hubs revolubly mounted on the shaft, an annular partition dividing the in-terior of the casing into a central crank chamber, and an annular compartment, cyl-inders supported by the casing and having their inner ends opening into the crank chamber, exhaust valve mechanism ar-ranged in the annular compartment between the cylinders, there being ports or passages through which communication is established between the cylinders and the inlet hub and exhaust valve mechanism, respectively, exhaust valve stems extending into the crank chamber, and means arranged within such crank chamber for engaging and actuating said stems.

881.444. Power Transmission Device. Carl A. Schlachter, Rockwell City, Iowa. Filed June 24, 1907. Serial No. 380,550.

1. A power transmission device comprising a drive member, a vane drum fast thereon, radial seats formed in the drum, vanes in said seats, springs housed in said seats and tending to force the vanes outwardly, and connections between the vanes, and a common actuating member for said connections.

881,460. Magneto for Sparking Mechanisms. Harold H. Brown, Boston, Mass. Filed Feb. 14, 1907. Serial No. 357,380.

1. An actuator for magnetos comprising revoluble armature shaft provided with a radial arm; a member rotatably mounted on said shaft provided with stops coacting with said arm to limit the movement of said shaft and member relative to each other; a spring interposed between said arm and said member; a device for temporarily obstructing the movement of said arm on said shaft and again releasing it; and means movable in the plane of the axis of said shaft for automatically effecting the cessation of such obstructing action when said shaft has reached a predetermined speed.

881,471. Method of Manufacturing and Assembling Ball Bearings. Ernst G. Hoffmann, New Rochelle, N. Y. Filed June 13, 1907. Serial No. 378,699.

The method of manufacturing a ball bearing which consists in forming uninterrupted integral inner and outer rings or race ways grooved respectively on the outer and inner circumierential faces to embrace the balls and prevent lateral displacement thereof when assembled, subjecting the body of the outer ring to an electric heating current while the working face thereof and the inner rings and the balls are maintained at a low temperature, moving the ring and balls relatively in the desired direction at the instant of maximum expansion to embrace or release the balls, and immediately cooling the outer ring to prevent the heating of its working face.

Power Transmission Device. Clarence P. Hollister, Pittsfield, Mass., assignor of one-half to himself and one-half to Herbert M. Stilson, Pittsfield, Mass. Filed Oct. 4, 1907. Serial No. 395,843

1. In a power transmission device in combination, a case fluid-filled and tight, a set of gears located in said case and connected respectively to the engine for power and to the running gear of the car or vehicle for transmission, means providing for and for regulating and controlling the movement of the fluid through the case or impounding the same, and so controlling the power delivered by the engine to and also the speed of the driven member, and parts providing for a frictional engagement or

881,545. Power Transmission Means. John E. Caps and Arthur W. Caps, Kansas City, Mo. Filed Jan. 25, 1907. Serial No. 353,983.

1. In an automobile, a drive gear comprising a frame, a drive shaft, a sleeve loosely mounted thereon, a clutch adapted to hold said shaft and sleeve against relative rotation, a pair of sprockets rigidly mounted on said sleeve, a countershaft, a sprocket rigid therewith and geared to one of said sprockets on said sleeve, a sleeve loosely mounted on said countershaft, a plurality of sprockets carried thereby, a jack shaft, a sprocket carried thereby to which one of said sprockets on said sleeve is adapted to be geared, an idler disposed in bearings movable on the frame, a sprocket chain trained over said idler and over one of said sprockets of said first named sleeve being disposed in the path of and adapted to be engaged by said chain when said idler is moved in one direction and a clutch disposed on said countershaft and adapted to engage said sleeve thereon to hold same against rotation relatively to said shaft.

"The A B C of Electricity." Price 50c. The Motor World Publishing Co., 154 Nassau St., New York City.





Accidents Happen

But there is no necessity for those frequent ignition troubles that many autoists experience. With a

SPLITDORF Common Sense Plug

in your engine you get perfect ignition every time. Price, \$1.25. Ask Dept. G for 1908 catalog.

F. SPLITDORF, Walton Ave. & 138th St.. NEW YORK



Dealers can make quick sales with this machine. The upkeep is very light; has solid rubber tires; goes through deep mud and sand, and climbs steep hills. Double cylinder, air cooled, 10-12 H. P. It's your loss if you don't get the agency. Write,

W. H. KIBLINGER CO., ox 250. AUBURN, IND.

Apperson Policy

"QUALITY NOT QUANTITY"
If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

showing actual cost of maintaining their cars. It also contains much advice of value to the automobile buyer. Ask for free copy of Booklet No. 6,

CADILLAC MOTOR CAR COMPANY, Detroit, Mich. Member Assn. Licensed Auto. Mfrs.



INDEX

Built to outwoar an auto, and it will
Send for Booklet

Index Speed Indicator Co.
MINNEAPOLIS, MINN.

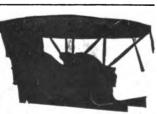
Continental Ready-Flated Tires. They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY

1788-1790 Broadway, cor. 58th St. New York City.

"Keep your eye on Continentals"

SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies SPRINGFIELD METAL BODY CO., 366 Birnie Ave., Springfield, Mass.





SMITH AXLES

For Light Runabouts

TYPE "C" REAR AXLE

Bevel Cear Drive
Roller and Ball Bearings
Internal Expansion Brakes

Drawings and Prices on Request.

A. O. SMITH CO.

243 Clinton Street, MILWAUKEE





DECARBONIZER

The Great Gas Engine Cleaner
Increases power 20-25 per cent. and removes Carbon from all parts of engine.
Sample Quarts \$1.50. Discount to the
trade. Agents wanted. 50,000 Users
guaranteed.

General Accumulator & Battery Co.

140 Second St., MILWAUBEE, WIS.

PENNSYLVANIA AUTO MOTOR CO.,

SIMPLEX CARS
Bodies Repaired, Trimmed and Painted.
Chassis Repair Department.
J. M. QUINBY & CO.
Automobile Body Builders.
Newark, N. J.



How Are Your Batteries? A CONNECTICUT VOLT AMMETER WILL TELL YOU

Guaranteed, and the price is right, send for catalogue and trade discounts.

CONNECTICUT
TELEPHONE and ELECTRIC CO., Inc.
Meriden, Conn.

THE MARMON

For catalog, address Dept. 16.

NORDYKE & MARMON CO.

(Estab. 1851) INDIANAPOLIS, IND.

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder
Runabouts, Roadsters, Touring Cars,
15 H. P., 24 H. P., 35 H. P.
Prices, \$850, \$1,250, \$1,500, \$2,000.

JACKSON AUTOMOBILE CO.. Jackson. Mich.

INVESTIGATE The Great Smith Car

SMITH AUTO. CO., MFRS. TOPEKA, KANSAS

To Owners of Cars Costing Over \$1800

Add the neat, snappy little Brush \$500 Runabout to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit

Silent
Powerful
Fast

ENNSYLVANI

2800 LBS 2800.00 WITH MACHETO 3000.00

Of the highest possible grade throughout.

Luxurious and Completely Appointed

Bryn Mawr, Pa.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to
The Motor World

for one year, commencing with the issue of

Name

Address

This is the

PULLMAN



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.



1908 Model D. 50 H. P.
Net/ factory, Saginaw, Mich.
Complete catalogue now ready,
RAINIER MOTOR CAR COM/ANY,
Broadway, cor. 56th St.,
New York.

LOGAN **Exclusive Features**

2-Single shifting lever gives three speeds forward and one reverse.

For other features write for catalog to

THE LOBAN CONSTRUCTION COMPANY, Chilleothe, O.

Before You Buy a Car

telephone a Mitchell agent and tell him you want to be shown the "silent argument" the Mitchell offers in demonstration. He'll be glad to show you—call him up—it's worth money to you if you are thinking of buying an automobile. (No obligation.)

MITCHELL MOTOR CAR CO., 282 Mitchell St., RACINE, WIS.

Boston Branch Motor Mart Bldg. 87 Church St.

New York Carford Metor Car Co.

CHAS. F. KELLOM & CO., Philadelphia. Pa.

"AURORA"

Runabout \$775—20 H. P. Commercial Wagon \$1000-20 H. P.

Live proposition to agenta.

AURORA MOTOR WORKS.

Aurora, Ill.



THOMAS

America's Champion in the New York-Paris Race. Send for map and route card.

E. R. THOMAS MOTOR COMPANY BUFFALO, M. Y.

Member A. L. A. M.



THE CONTINUENTAL AUTO MEG. CO.

"REMY MAGNETO"

Means absolute reliability of the ignition system. Investigate for your 1908 car. REMY ELECTRIC CO.. Anderson, led.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.

LAVALETTE & CO. 80% of Magnetos used in 6-cylinder cars are EISEMANN High-Tension MAGNETOS 112 West 424 Street, NRW YORK

TRUPPAULT-HARTFORD

SHOCK ABSORBER

Murt

And Comforts

The Device that made Safe, Speedy and Comfortable Automobiling Possible.
Write for Rough Road Booklet to Department L. to Departm Write for Rough Road

HARTFORD SUSPENSION CO., E. V. Hartford, Pres. 66 Veetry St., New York

"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade
two and four cylinder motors, 10 to 45
horsepower. They
are equipped with
self-contained oling
system and ready
for attaching magne to . H ig he as
grade workmanship,
efficient, durable
and simple. Also
clutches and transSend for catalogue.

CONTINENTAL MOTOR MFG. CO., Muskegen, Mich.

K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akren, Ohio

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name.

Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



is equal to any \$1.50 plug. Mas big air chamber, protected porcelain, bronze non-sticking bushing, won't leak,—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price-\$1.00.

THE R. E. HARDY & CO., 88 Watts Street, New York City

McCORD LUBRICATORS — RADIATORS

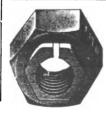
"Marks of a Good Motor Car"

McKIM COPPER-ASSESTOS GASKETS

McCORD & COMPANY

NEW YORK OFFICE—24 Broad Street. Old Colony Building, CHICAGO.





Nuts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts
COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.

FRANKLIN Automobiles

Before you buy any automobile see it weighed and test its strength.

Look at the running-cost of a light-weight automobile compared with a heavy one.

You can carry seven passengers in the Franklin Type H automobile cheaper than you can run the ordinary 5-passenger machine. And Type H has six cylinders with all the smoothness and speed and perfect balance they give. Think of it!—a powerful roomy touring-car refined and strong and capable of 55 miles an hour; yet weighing only 2600 pounds, and actually costing less to own and run than the average 5-passenger 4-cylinder machine.

Other seven-passenger machines both 4 and 6 cylinders, weigh on the average, a thousand pounds more than Type H, and cost over 40 per cent. more to run besides depreciating faster. All the Franklin models are on the same principle—high power with strength and light

weight.

The Franklin doesn't bump itself to pieces nor jolt its passengers. The laminated wood-frame and four full-elliptic springs absorb road-shocks. There are no water-cooling troubles. What water-cooled motor could run a solid week with the automobile standing still in a warm salesroom, as the air cooled Franklin did at Chicago? What heavy automobile could run from Chicago to New York in less than 40 hours?

You can't drive a heavy, steel-frame, hard-riding automobile at speed safely and comfortably on American roads.

You're sure of comfort and safety in a light-weight Franklin.

16 h. p. 4-cylinder Runabout.......\$1,750 28 h. p. 4-cylinder Touring car or Runabout...\$2,850 16 h. p. 4-cylinder Touring car...... 1,850 42 h. p. 6-cylinder Touring car or Runabout... 4,000 Prices F. O. B. Syracuse.

Write for catalogue describing the Franklin.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

Quality Counts

probably for as much in a motor car as in any purchasable commodity.

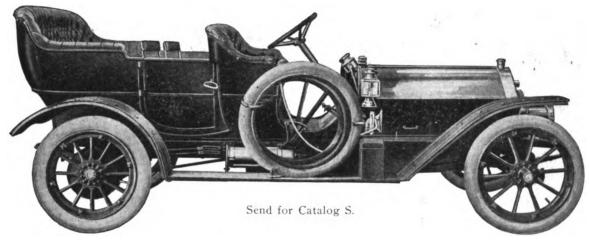
Results Determine the Real Worth.

¶ The Premier Pathfinder which is laying out the 1908 Glidden Tour, started from Buffalo, N. Y., Friday, May 1st, to encounter roads which on account of extremely unfavorable weather conditions were considered practically impassable for the most part, after the heavy rains and a severe snow storm.

¶ The hardships encountered have proven the sterling worth and reliability of the sturdy Premier, every obstacle being overcome without delay or difficulty, proving that the car warranted the confidence imposed in it, and was a timely recognition of its meritorious performance in the 1907 Glidden Tour.

€ Every contest in which it has participated, and every Premier in private use show such performances as these to be characteristic of Premier cars.

■ It is also holder of the world's non-stop record of 4,906 miles.



PREMIER MOTOR MFG. CO., Indianapolis, Ind., U. S. A. Members A. M. C. M. A.



MORGAN & WRIGHT TIRES ARE GOOD TIRES

The proof of their goodness is in the service you get.

Made for but one purpose: to withstand the grind of everyday, everywhere, incessant driving over all kinds of roads.

MORGAN & WRIGHT, Detroit

BRANCHES, AGENCIES OR DEALERS EVERYWHERE

Large Sales

make it possible for us to import THE CELEBRATED BRAMPTON CHAINS from ENGLAND (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers,

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like THE CELEBRATED BRAMPTON CHAIN because some of the other chain makers began to copy the design and shape of the BRAMPTON CHAIN links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the BRAMPTON CHAIN than ever before. These chains somewhat resemble the BRAMPTON in appearance, but the manufacturers of such chains have been unable to copy the material-self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the BRAMPTON MOTOR CHAIN in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the BRAMP-TON FILLS THE BILL, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of

CHAINS TO FIT AMERICAN CARS

Your 1908 Car

You can have the new car that you order fitted with the CELEBRATED BRAMPTON CHAIN if you order it that way. No extra cost to either you of the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for BRAMPTON CHAINS, and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack. \$3.50 esch

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824Main St., Buffalo. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

A TEST OF PRINCIPLE AND QUALITY

Probably one of the hardest tests an Automobile has ever been put to, has been met by the American entry, A THOMAS FLYER, in the New York to Paris Contest. The front wheels of this car are fitted with Timken Roller Bearings, the hardest service on a car for bearings—but up to the present time has given no trouble or needed any attention.

E. R. THOMAS MOTOR CO., Buffalo:

E. R. THOMAS MOTOR CO., Buffalo:

Gentlemen—It gives me great pleasure to inform you that the TIMKEN ROLLER BEAR-INGS which were used on the Thomas Flyer, which is America's entry in the International Race from New York to Cheyenne, where I had charge of the car. I also believe that they have given no trouble since. These bearings, as you know, are placed where the greatest strain is on them, and it is a considerable pleasure to inform you that I believe the high quality of workmanship and material in your bearings is such, that they must be able to stand up under any and all road conditions, as the strain placed upon them, and in fact the entire mechanism of the Thomas car in this race was most extraordinary, and probably the hardest strain that could be put upon any motor vehicle, either under ordinary or extraordinary circumstances. The highest praise that I can give your bearings is, that I believe that they are fit component parts for the Thomas Flyer.

Yours very truly,

MONTAGUE ROBERTS.



are made to use on all roads, rough or smooth, and represent a special knowledge of load and tractive requirements, with a wearing quality impossible with any other form of frictionless bearings. And that is why over 60 per cent. of all the high grade American Automobiles and 95 per cent. of the Trucks made in this country recognize The Timken Principle Correct and The Timken Quality

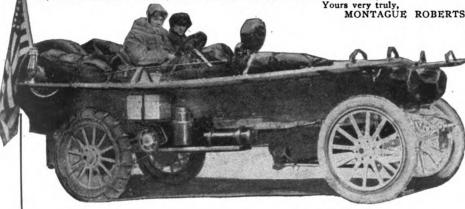
If you are building Automobiles or Trucks we would like to furnish you some data, based on facts that will not only interest you, but save you money.

The Timken Roller Bearing Axle Co. CANTON, OHIO

BRANCHES

10 EAST 31st STREET **NEW YORK**

429 WABASH AVENUE CHICAGO





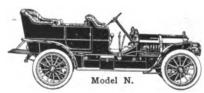
Write for our complete catalogue and book of customers' letters. How il we have succeeded in building the best motor car in all the world is by our customers themselves, who, as a class, are the most prominent of officials in the customers. well we have succeeded in but told by our customers themse men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co. Dealers are wanted in all localities where we are not now represented. MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa. Licensed under Selden Patent.

Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.



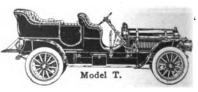
Model K- 4 cyl., 476 x 5 \$3,500

Medel N — 4 eyl., 5x5 \$3,700

All Nationals have two complete systems of ignition.

Medel R - 6 cyl., 41/2 x43/4 \$4.200

Model T - 6 evi., 5x5 \$5.000



Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co. 1007 E. 22d Street INDIANAPOLIS, IND.

It is Our Aim

to produce not the cheapest tires from the standpoint of first cost, but tires of the highest standard—tires that will by continued service prove the most economical for the user.

"Firestone" Tires

"The Tires of Sterling Quality"

"Firestone"

We furnish tires

We furnish tires to fit any rim

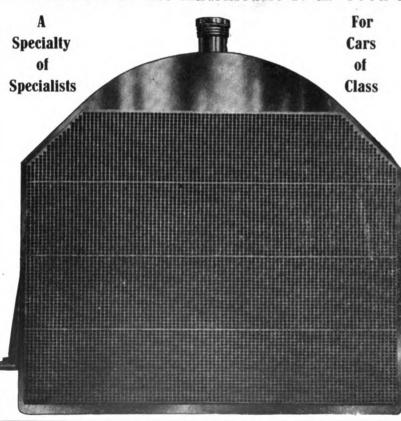
are made from the best materials—by the most skillful workmen—under the careful supervision and critical inspection of tire building experts. They embody the latest and best principles approved by modern tire building practice.

Main Office and Factory, AKRON, O.

Branches and Agencies Almost Everywhere.

Firestone Tire & Rubber Company

If the Rest of the Automobile is as Good as the Mayo Radiator It's All Right



- ¶ Mayo Radiators sell on a strictly quality basis.
- They are not made, and will not be made, to conform to price.
- Hence, they are a fixture on most of the really high-class cars only.
- Contracts for next season's requirements are now being arranged.
- As quality-work is our specialty, quantity is limited, despite large facilities.

MAYO RADIATOR CO.

New Haven, Conn.

THE INCOMPARABLE

THE CAR FOR SERVICE



DOUBLE VICT(RY IN HARRISBURG ENI URANCE RUN.

A 30 horsepower White Steamer was the only touring car to make a perfect score in the 320-mile endurance run of the Motor Club of Harrisburg, held May 4 and 5. The White was awarded the principal trophy, the Board of Trade Cup, and also the PATRIOT Cup for which four cars, including the White, tied in last year's contest. Three of last year's successful drivers competed with the same makes of cars in this year's contest and their relative performances decided the award of the 1907 trophy, the White, of course, being the winner.

The contest was run over the rough and hilly roads of eastern Pennsylvania. A 20-mile-an-hour schedule prevailed, with checking stations at intervals of approximately 30 miles. Each car carried an observer, and, in addition, all working parts were sealed. At the conclusion of the run the cars were critically examined by a committee of well known experts.

That the single White entry should have made the only perfect score in the touring car division is significant of the superior reliability and strength of construction of the White. The results of the Harrisburg contest, it should be further pointed out, were the same as in the memorable contest of the Quaker City Motor Club on January 1, 2 and 5, and in last year's struggle for the Hower Trophy, in that the single White entry proved triumphant over a large number of the leading gasolene cars.

Call and see the car in a class by itself

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Chicago, 240 Michigan Ave. Philadelphia, 629-33 N. Broad St. Pittsburg, 138-148 Beatty Street.

Exclusive Features Solar Lamps

(4) Durability



A lamp constructed with an unlimited amount of brass and a liberal use of solder is often held up by the unscrupulous dealer as a durable lamp for reason of its weight.

Solar Lamps are heavy, but have fewer parts and less solder than any other make. The Solar weight is in brass. Demand that your car be equipped with the accepted standard.

This important detail and all others explained fully in our new 1908 catalog. Write for copy.

Badger Brass Manufacturing Company

KENOSHA, WIS. 436 11th Ave., **NEW YORK**



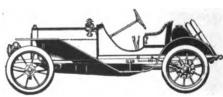
No. 14 Palmer.Singe Six-Sixty. Runab

6 Cylinder, 60 H. P. \$2,850

Palmer-Since Four-Thirty Skimabout 4 Cylinder, 30 H. P. \$1.958

All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Paimer-Singer Four-Forty Seven-Passenger Touring 40 H. P.



Palmer Singer Town 28-30 R. P. \$3,000

Palmer and Singer Six-Fifty Racing Car. \$2,450

The Six-Fifty is a gentleman's racing carthe fastest thing on the road—the snapplest thing on the market. It has all the appearance, the speed, the endurance of a Vanderbitt Cup racer and will be tremendously popular.

Metropolitan Distributors the SELDEN

Palmer & Singer Mfg. Co.

1620-22-24 Reconstruction

1620-22-24 Broadway, New York 1321 Michigan Avenue, Chicago

Maxwell"

"When My Car Is In Condition,"

Protested a disgruntled driver when his machine had lost a hill-climbing contest to a lower (rated) power Maxwell—"when my car is in condition, I can beat you all right, all right."

The Maxwell man laughed. "I admit it," he said cheerfully—"At least, I would, if I ever saw a car of that make 'in condition."

I was only an innocent—though interested—bystander, so I held my peace.

But I thought, if the man who contemplates buying a car this season could appreciate, as I do, how much that controversy indicated as to the difference between Maxwells and other cars—why! we never could turn out enough to meet the demand even with the addition of our new ten acre factory at Newcastle, Indiana.

"When they are in condition," other cars sometimes defeat Maxwells—one never can account for the spectacular sprint of a "dark horse"—any more than he can depend on a repetition of it.

But the quality that I like in Maxwell cars—the quality that enables every Maxwell owner to wear a confident expression just before, as well as a contented one after, a contest—is that of consistency, certainty, dependability or whatever you may term it, that you can stake your life on.

Maxwell drivers have at their command a known quantity of power and performance and they can rely on repeating, at any time or place any performance done anywhere else with a Maxwell.

"It serves you right"—the Maxwell.

Benj Briscae President.

MAXWELL-BRISCOE MOTOR CO.

P. O. Box 106, Tarrytown, N. Y.

Members A. M. C. M. A. Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.

MMA

Model 248

A Remarkable Car at a Remarkable Price

In presenting this model we offer a car with all the power, service and appearance of any \$4000 car at less than half that price.

NOTE THE DETAILS

32 h. p. motor, sliding gear transmission with roller bearings throughout, 34-in. wheels with 4-in. tires, floating rear axle, two sets of powerful brakes, both working in the rear wheels, thus relieving the driving mechanism of all braking strain and, if desired, a detachable tonneau body that may be changed to a touring runabout in less than five minutes.

PRICE, with full equipment of lamps, tools, etc., \$1900

Write today for special circular aescribing this car

Thomas B. Jeffery & Company

Main Office and Factory, Kenosha, Wisconsin

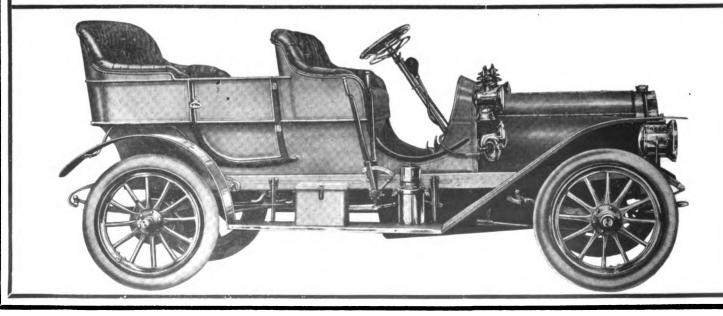
Chicago

Milwaukee

BRANCHES AND DISTRIBUTING AGENTS

Philadelphia

San Francisco



Volume XVIII.

New York, U. S. A., Thursday, May 21, 1908.

No. 8

INJUNCTION WITH A STRING TO IT

Court Grants Badger's Appeal and Suspends the Rushmore Judgment—Wisconsin Badger not Involved.

Despite reports that the Rushmore Dynamo Works had obtained a preliminary injunction restraining the Badger Brass Mfg. Co. of New York from marketing the so-called flarefront type of lamp, it transpires that the injunction has a string to it, and as a matter of fact is not now operative.

When the motion for a preliminary injunction was granted in the United States Circuit Court for the Southern District of New York, the Badger company presented a petition for leave to appeal to the Circuit Court of Appeals and praying that the appeal be made a supersedeas. This petition Judge Lacombe granted and further ordered that the preliminary injunction shall not become effective until two days after the announcement of the decision of the Court of Appeals in the case of Rushmore vs. Manhattan Screw & Stamping Works.

The litigation, it is also made plain, involves only the Badger Brass Mfg. Co. of New York, and not the Wisconsin company, who it is authoritatively stated is quite ready to defend any suit that may be brought against them in any court to which they are subject.

Banker's Cash Capital 60 Cents..

Supplementary proceedings in the Chicago Debtors' Court on the 15th inst., developed indications that Albert C. Banker, once head of an automobile business in that city, no longer possesses the wealth which which once he was credited. The Curtin Supply Co. some time ago obtained in the Municipal Court, a judgment against him for \$35, and the proceedings brought in the Debtors' Court were to elicit an explanation of why the judgment has not been satisfied. Banker scheduled his present worldly possessions as follows:

Cash. 60 cents; souvenir watch, value 75 cents; two suits of clothes and one overcoat.

R. H. Smith Mfg. Co. Reorganizes.

Reorganization of the R. H. Smith Mfg. Co., Springfield. Mass., made necessary by the tragic death of R. Hale Smith, former president of the company, has been effected by the election of the following officers: President, Henry M. Smith; first vice-president, Arthur H. Rogers; second vice-president, Frank M. Chapin; treasurer, Henry T. Lorimer; secretary, Frank A. Wakefield. The company will continue without change of name to make Springfield motormeters.

Bondholders Buy Berkshire Property.

When the plant of the Berkshire Motor Car Co., Pittsfield, Mass., was put up at auction last week, it was bid in by a lawyer representing the bondholders. He paid \$50 more than the mortgage of \$28,000. This disposal of the property means that neither the stockholders nor creditors will receive anything, despite the fact that when the Berkshire company first got into trouble it was stated that the creditors probably would be paid in full. The liabilities amounted to \$35,000.

Three New Men in Monarch Affairs.

At the annual meeting of the Monarch Cotor Car Co., in Chicago, last week, three new directors were added to the board, viz.: R. J. Gunning, F. A. Moody, and Rush C. Butler. The old directors re-elected were P. M. Hanney, Evan A. Evans, M. H. Kilgallen, and T. A. Quinlan, Jr. The directors in turn re-elected Mr. Quinlan president and general manager, and J. A. Ward, secretary and treasurer.

Chicago Printers Sue Electric Vehicle.

Two suits were filed in the Superior Court in Chicago on Thursday last to attach \$16,725 of the funds of the Electric Vehicle Co., now in the hands of a receiver. The suits were brought by Rogers & Co. and the Long-Critchfield Corporation, both of Chicago, to collect money for printing catalogues and for advertising.

LOOKING FOR A BIGGER DIVIDEND

Pope Creditors Dissatisfied with Proposed Reorganization Plan—Likelihood of Amicable Adjustment.

Although the petition of the receivers of the Pope Mfg. Co. for authority to pay the creditors a dividend of 25 per cent. is before the courts, it transpires that the creditors do not believe the amount is sufficiently large. They are of opinion that the funds in the receivers' hands justify the payment of at least 50 per cent. of their claims and they are making an effort to obtain it. C. N. Gillett, cashier of the First National Bank of Chicago, who is secretary of the creditors' committee, and as representing that committee, has addressed the creditors with a view of achieving that end by bringing to bear united objection to a plan for the reorganization of the Pope company, which has been outlined by the stockholders.

It appears that a memorandum of this plan was submitted to the creditors' committee at a meeting held in New York on May 6th, which plan proved not satisfactory to the committee. It is understood, however, that within the last few days things have moved in a direction that presages an amicable settlement.

The plan provided for the raising of only \$119,000, being an assessment of \$5 per share on the first preferred stock, and the payment of a 25 per cent. dividend in cash and new obligations of the company for the balance of 75 per cent., payable in one, two and three years, with interest at 5 per cent.

In his address to the creditors, Secretary Gillett, of the creditors' committee, states the case in this language:

"The Pope Mfg. Co. now has on hand, in round figures, \$900,000 in cash, applicable to dividends. By their auditor's figures they will have on hand by August 1, between \$1,200,000 and \$1,300,000. This has been gotten together by the sale of two

properties in Chicago and from the result of their business generally. As the debts of the company approximate \$1,600,000, it will be seen that these figures would permit the payment to creditors of 75 cents on the dollar by August 1, which would leave the properties at Hartford, Westfield, Hagerstown, Cleveland, and Elyria from which to realize, say, \$300,000 or \$400,000. more. This is outside the various other interests owned by the company.

"The committee is emphatically of the opinion that the money now on hand and in sight belongs to the creditors and should be disbursed to them at once unless a proper re-organization plan is presented by the stockholders, providing for the payment of a dividend of at least 50 per cent. to creditors immediately, and the payment of the balance in not more than two years, and providing further for the furnishing of an ample working capital by stockholders, say, \$400,000. Anything materially short of this will amount to a great injustice to creditors under the circumstances of the case, unreasonably deferring their claims and exposing them unduly to the risks of the business. The committee has advised the stockholders through their counsel of its opinion as herein stated, and of its rejection of the stockholders' plans, so far as it is authorized to speak for the creditors on such a point.

"We are advised that the attorneys for the receivers will soon present a petition to the Vice-Chancellor at Newark, N. J., asking that the receivers be allowed to continue the business at Hartford for another year in the interest of the stockholders. Your committee proposes strenuously to object to this and asks for the support of the creditors before the court.

"The Vice-Chancellor has assured us that creditors will receive due notice before any order is made allowing the continuance of the business beyond August 1 of the present year. In all probability there will be an early hearing on the question, at which the committee expects to be represented by counsel and wishes to make a strong showing in behalf of the creditors."

Big Company Goes Bankrupt.

A petition in bankruptcy has been filed against the Empire State Engineering Co., with offices at 149 Broadway, New York, and works at 555 East 116th street, and at Rome, N. Y., by these creditors: National Brass & Copper Tube Co., \$318; Henry F. Peake, \$126, and Frederick M. Kreimer, \$289. It is alleged that the company is insolvent and on May 12 allowed a city marshal to sell some of its property on an execution in favor of the De La Vergne Machine Co. The company was incorporated in March, 1902, with \$500,000 capital, to marufacture electrical devices for automobiles and truck propulsion; over \$100,000 was spent in machinery. The company has a large plant at Rome, against which bonds of \$75,000 were issued.

The Week's Incorporations.

Los Angeles, Cal.—Fuller Motor Car Co., under California laws, with \$75,000 capital.

Newark, N. J.—Automobile Equipment Co. of Newark, under Delaware laws, with \$200,000 capital.

Augusta, Me.—Auto Livery Co., under Maine laws, with \$75,000 capital. Corporator—J. Berry, president and treasurer, Augusta, Me.

Chicago, Ill.—Auto Taxicab Co., under Illinois laws, with \$30.000 capital; general livery and garage. Corporators—C. E. Selleck, R. R. Howard, M. J. Isaacs.

Fort Collins, Col.—Hawthorne-Corbin Motor Co., The under Colorado laws, with \$6,000 capital. Corporators—W. A. Hawthorne, Franklin Corbin and H. W. Humphrey.

Denver, Col.—Wood, Erickson & Trimble Automobile Co., under Colorado laws, with \$25,000 capital. Corporators—Thomas C. Wood, Louis O. Erickson, Clarence J. Trimble.

Rochester, N. Y.—Gearless Motor Car Co., under New York laws, with \$300,000 capital. Corporators—William Bausch, George F. Roth, W. H. Rogers, John W. Brayfogle, and J. J. McInerney.

St. Louis, Mo.—Leader Mfg. Co., under Missouri laws, with \$150,000 capital; manufacturing automobiles, motor vehicles, etc. Corporators—Frank D. Gildersleeve, Augustus Ross, John E. Tackabury, Heury W. Allen.

New York City, N. Y.—Benner Motor Car Co., under New York laws, with \$40,000 capital; to manufacture automobiles, motor cars, etc. Corporators—A. J. Michelbacher, J. C. Welwood, R. P. Benner, New York City, N. Y.

Chicago, Ill.—Parmelee Taxicab Co., The under Illinois laws, with \$250,000 capital; to operate a public motor cab service. Corporators—John J. Mitchell, John C. Shaffer, J. B. Wilbur, C. H. Randle, Norman B. Ream and others, Chicago, Ill.

Rome. N. Y.—Willex Mfg. Co., The, under New York laws, with \$10,000 capital; manufacturing gasolene and oil engines and automobile and motor boat accessories. Corporators—Daniel B. Willex. John Willex, Christopher Schneiffer, Rome, N. Y.

Valley Stream, L. I.—Merchants' Long Island Delivery Co., The, under New York laws, with \$4,000 capital; to transport merchandise by means of electric vehicles. Corporators—Frank Battenhausen, August Battenhausen, and Louis Roanes, Valley Stream, L. I.

In the Retail World.

A. A. Webber has taken over from James Cooke the Carterear agency at Los Angeles, Cal. He will handle also the Harley-Davidson motorcycle.

Ortman & Hansel's garage on Market street, Stockton, Cal., was visited by fire May 7th, and although the building was saved two automobiles were destroyed and ten others were damaged.

The American Auto Co., of Cedar Rapids, Ia., have opened a branch office and garage at Iowa City. A repair shop is included in their new establishment.

That pioneer, George H. Lowe, has, with R. S. Crawford, formed the Lowe-Crawford Co., and opened salesrooms at 173 Huntington avenue, Boston. They will handle the Crawford car.

The Paxton Hardware Mfg. Co., of Paxton, Ill., has opened a garage and repair shop in the Cruzen building at East Pells street and Railroad avenue. They handle the Reo and Premier cars.

A new garage for the A. G. Randall Co., of Boise, Idaho, is under construction. The building is one story high and will afford ample room for a mechanical department as well as for garage purposes.

C. J. Durheim, conducting the Muskegon Bicycle and Auto Co., at Muskegon, Mich., is to have a new building two doors east of his present quarters on Clay avenue. It will be of brick with a frontage of 54 feet.

Under the name of the Earlville Garage Co., F. V. Dolder, G. H. Bernard, and E. J. Dolder, of Sheridan, Ill., have purchased the business of W. E. Angier. Hereafter it will be conducted as the Earlville Auto Garage.

A petition to have the Lakedel Auto Co., No. 5143 Delmar boulevard, St. Louis, Mo., declared a bankrupt, has been filed in the United States District Court. The petition alleges that the company has admitted its willingness to be adjudged a bankrupt.

Schedules in bankruptcy of the Kalb & Berger Mfg. Co., repairers, 530 East Seventy-second street. New York, show liabilities of \$7,764 and nominal assets of \$4,825, consisting of stock, \$1,000; machinery, \$2,458; accounts, \$366; an automobile, \$1,000, and cash, \$1.

The Spear Auto Co., of Portland, Me., has been obliged, by the growth of the automobile interest in that city, to open a branch store and repair shop on the water front. They will give attention to the repair of motor boats, in addition to automobile repairing.

The Auburn Motor Car Co. is the most recent accession to Philadelphia's "automobile zone" on North Broad street. The company is composed of F. Liebfried, Jr., and Howard W. Trump. They have located at 441 North Broad street and will handle the Auburn car.

The Fred A. Bennett Automobile Co., of Spokane, Wash., is to have a new garage on Second avenue, between Post and Lincoln streets, a locality that is developing into an "automobile row." The building, which is being creeted especially for their use, will be of brick, one story high and 142x50 feet in dimensions.



LOBDELL AFTER A POPE INTEREST

Receivers Entertain Offer for American
Wood Rim Shares—Court Hearing
Set for That and Other Matters.

E. J. Lobdell, the head of the bicycle wood rim pool, is in a fair way of obtaining a splendid bargain. He has made an offer of \$50,000 cash for the 1,465 shares of stock in the American Wood Rim Co., which are held by the receivers of the Pope Mfg. Co. and which have been carried on the books of the Pope company as of July 31, 1907, at \$73,250. The par value of the shares is \$100.

The American Wood Rim Co. is a part of the so-called Mutual Rim Co., which is the style under which the pool operates. It is a tight little combination which has kept up the price of bicycle rims despite the constant complaints of the bicycle manufacturers. It is practically a monopoly and it is understood that it always has earned a hand-some profit. The combination is practically dominated by Lobdell.

Testifying that the Lobdell offer is the best that has been made for the 1,465 shares, the Pope receivers have asked the Court of Chancery of New Jersey for instructions as to whether or not they shall accept the \$50,000. The hearing on the receivers' petition will be held in Newark Tuesday, May 26, at 10 a.m.

It is ordered that at the same hour creditors and stockholders of the Pope Manufacturing Company show cause why the petition of the receivers for leave to pay a dividend of 25 per cent. should not be granted.

The International Trust Company of Boston must also, at the same time, show cause why in declaring a dividend upon its claims, there should not be deducted the sum of \$9,407.49. This company presented to the Pope receivers claims upon promissory note obligations, aggregating \$75,000, which matured after the appointment of the receivers. At the date of the appointment the Pope Manufacturing Co. had \$9,407.49 on deposit with the International Trust Co., which was not given up, on the receivers' demand.

Times Square Loses Its Suit.

The Bergen County (N. J.) County Court last week decided against the plaintiff in a rather unusual suit brought by the Times Square Automobile Co., of New York against the Rutherford National Bank. John Purdy bought an automobile from the plaintiff last August and gave a check of the Rutherford bank for \$650. A representative of the company went to Rutherford the next day and had the check certified, but Purdy stopped payment, because the automobile he alleged, was not what was represented. The Times Square company maintained that the bank could not

stop payment on a certified check, but the verdict upheld the bank.

Offer for Pope-Toledo Plant Declined.

Toledo has had another paroxysm. Some one named Apperson-not connected with the Kokomo Appersons-made an offer of \$400,000 for the Pope-Toledo plant and the three receivers of the Pope Motor Car Co. -not excepting the Ohio receiver who was appointed at the instigation of disgruntled Toledoans - declined the offer. The Toledo folk who accuse the receivers of having no regard for their city or for the Pope-Toledo property, promptly "threw a fit." The trouble with the Apperson offer was that it was only a trifle of \$200,000 less than the Schwab offer and, like the latter, was made in spoken words and not in writing; and even receivers cannot ask the courts to pass on verbal bids. Whom Apperson represents does not appear to be known.

Remington Stockholders Can't be Assessed.

After six years of complicated litigation, the action brought by the trustee of the long defunct Remington Automobile & Motor Co., of Utica, N. Y., finally has been decided in favor of the defendant stockholders who, by the decision, are relieved from the necessity of paying assessments on their stock holdings, as one of the several verdicts required of them. The history of the company and the story of its short life in Utica has been told at length during the many years that the company's affairs have been before the courts. The final chapter now is written as the Appellate Court's decision is against the trustee, and the time within which an appeal from this decision may be taken having passed, the matter is finally and definitely closed.

Royalty Reduction Case Aired Again.

Additional argument was presented in the United States Circuit Court at Trenton, N. J., on Monday last, 18th inst., on the petition of the receivers of the Electric Vehicle Co. to reduct the amount of royalty exacted of the licensees under the Selden patent, but no decision was rendered. The court took the case under advisement. The feature of the hearing was the appearance on the scene of Job E. Hedges, counsel of the American Motor Car Manufacturers' Association. He represented several minor creditors of the Electric Vehicle Co., and of course opposed granting the petition.

Lunch Boxes Emptied the Treasury.

The Atlas Mfg. Co., Hampton, N. H., which manufactured automobile lunch boxes, is in financial difficulties. Its schedule shows assets of \$9,211.89, and liabilities of \$13,745.

Tryon Named as Receiver for Martini.

James O. Tryon has been appointed receiver for the Martini Export Co., New York, against which, several weeks since, a petition in bankruptcy was fined.

ENGINEERS TO MEET IN CLEVELAND

What They will Discuss and Who will Address Them—Local Factories to be
Visited and Inspected.

In accordance with the policy suggested at the meeting of the Mechanical Branch of the Association of Licensed Automobile Manufacturers, in Chicago, in December last, to the effect that the meetings be held at different points throughout the country, in order to give the engineers an opportunity to inspect and study the different factory methods of its members, the next meeting of the Mechanical Branch will be held at the Hollanden Hotel in Cleveland, Friday, May 22d.

The morning session will begin at 9 o'clock, taking up the subjects of proposed standard brake and clutch levers which has been given a certain amount of attention by the engineers and especially the test committee for the past three or four months. A full report of data gathered by the test committee relative to the dynamometer of the Automobile Club of America will be given and discussed. The report of the dynamometer tests is expected to contain some interesting matter. Papers on the two-cycle motor will be read by E. W. Roberts and A. W. Thompson, of the Electric Welding Products Co. will give an illustrated lecture on the advantages of combination valves, nickel steel heads and carbon steel ends. In the afternoon, and possibly the following day, the local factories will be visited and studied by the engineers in a body.

Trustee Chosen for Shoemaker.

At a meeting of the creditors of the Shoemaker Automobile Co., of Elkhart, Ind., called to elect a trustee, the Elkhart County Trust Co. was chosen for that office much to the surprise of the friends of Wilson Roose, the receiver, who also was a candidate. J. C. Fuller, representing the creditors quietly brought about the result, the vote standing 53 to 17.

McNevin Becomes Sales Manager.

Thomas H. McNevin, who has been acting as the Chicago representative of the Breeze Carburetter Co., has been called to the Newark (N. J.) factory where he will have charge of the sales department. Before leaving Chicago, he placed the Breeze goods with Fulton & Zinke, 1256 Michigan avenue.

Tire Manufacturers to Meet To-day.

A general meeting of the automobile tire manufacturers is due to occur in Cleveland to-day. Their object is to do something to remedy abuses which recently have arisen in the sale of their goods and caused a deal of friction.



Do You Realize What It Costs to Carry Dead Weight?

The man who parts with his good money for an automobile in these days is looking far beyond the first cost of the car. He wants in the first place to pay no more than a fair price for his car, but his real point of investigation is the cost of maintaining it after he has purchased.

The Oakland is made for this man.

It is designed and built for the man who runs but one car. It is made for the man who wants a car that is big enough to take his family out for a ride, and not too unwieldy for daily use about town when engaged in business.

It has all the power, style, and comfort which the exacting motorist is right in demanding, but the whole design and purpose of the car is to give the utmost value and the greatest service for the least possible expenditure.

How the Oakland Cuts Down Maintenance Costs

The Oakland car has been so refined in construction and design, with the number of working parts reduced to a minimum, but it weighs from 500 to 1,000 pounds less than other two and four cylinder cars of equal horsepower.

Aluminum is used freely throughout in its building, and it has less adjustments and working parts by over 50 per cent. than other cars of equal power and capacity.

The prompt and silent motor delivers through its straight line drive shaft full 20 horsepower to the rear axle.

The Oakland motor is a triumph of automobile designing—a two cylinder vertical motor that is perfectly balanced and free from vibration.

In appearance, performance, and cost, this is the car that most completely meets the demands of the discriminating buyer. It is an unusually good proposition for the better class of agents. Will you write to-day for further information?

OAKLAND MOTOR CAR CO., Pontiac, Mich.

SEND FOR NAME AND ADDRESS OF OUR NEAREST REPRESENTATIVE.



Published Every Thursday by

The Motor World Publishing Company

Soseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . . 10 Cents Foreign Subscription \$4.00

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 4, 1908.

The A. C. A. and Its Workings.

"Lest we forget," and before the affair is made appear what it is not, i. e., an embroglio over the Vanderbilt cup rules, it is well to point out (1) that despite its present untenable attitude, the very fact that the Automobile Club of America, so-called, was until two months ago a member of the New York State Division of the American Automobile Association, is proof that it recognized what every one else in America recognizes, that is, that it is a purely local club without national authority or functions; (2) that it "got mad and refused to play" and withdrew from the A. A. A. not because of the Vanderbilt cup rules or any other after-excuse, but because it could not dictate the legislation for all of New York State, the legislation which it sought to impose involving (1) license fees up to \$40 per year; (2) fines up to \$1,000; (3) revocation of the citizens' right to the use of the common roads and, substantially, confiscation of his private property. The Automobile Club of America (of New York) performed one other service of doubtful benefit to American interests and that serves further to doubtfully endear it to American hearts: Its foreign correspondent committed the manufacturers and sportsmen of this country to a rule restricting sport to four-cylinder cars, thus effectually barring "sixes" and "doubles," of which there are many in America.

The State of the Trade.

To that oft-repeated and frequently embarrassing question-How's business? a variety of answers may be given, according to the depth or superficiality of the respondent's reasoning. If the question were asked in regard to the condition of the automobile industry at the present time, and answered in full knowledge of existing conditions, the reply would be without qualification, "Good." It is a general principle based on sound reasoning, that the bulk of business favor inclines to the firms which make the most consistent and forceful effort to secure and retain it, just as the compass needle points to the strongest pole in its field regardless of the number of other poles which may influence its position.

Those makers who have been building cars with the clear idea in view of catering to a certain class of customers; who started in with ample resources and skill at their command and have adhered to first principles with fidelity and concentration of their energies; those who have built their cars thoroughly and well; are the shining lights in the field to-day who are more or less subject to the envy of their less successful competitors. They are the established and reputable makers who even in times which otherwise may be reckoned as comparatively dull are reaping the harvest which their far-sighted policy has merited.

This in itself constitutes a reply to the shallow reasoners who decry from time to time the "runs" on various popular brands of car, and even hint at the eccentricities of popular favor. Quite to the contrary, the popularity of any given machine extending over from season to season must be taken as an indication that it is coming into a position on the market which it truly deserves; that its makers are receiving a just reward for their efforts. At no time is the effect of such popularity more evident than

during and immediately after a period of business depression. It requires a crisis to emphasize to the men in the trade the facts which have been patent to outsiders to develop the prestige of real worth.

In the broadest possible sense, people have been buying automobiles hitherto. Now it has become necessary to sell them. The demands upon salesmanship are greater than ever before, the "selling points" of the products have taken on new importance, the real worth of the car in distinction from its superficial attractions has become paramount. All this means a reorganization of selling methods, an overhauling of selling forces and the dolorous elimination of many petty men in pretty clothes whose actual value to the industry has been discovered in connection with the overturning of the former systems of administration.

Such changes are continually taking place—some with visible result, some more subtly. Certain firms are finding the market constantly improving, while others experience conditions which are just the reverse. It is a process of gravitation, permitted to take place now that the turmoil of the formative period of the industry has in a measure subsided. The results of real business ability and faithfulness to a wisely chosen policy are beginning to be distinctly manifest, and where this is the case, it is found to be true that business is indeed very good.

Prices and Reasons Therefor.

It always is difficult to reconcile a certain class of buyers to the high prices asked for the certain grades of goods. In the automobile industry this is particularly true with regard to the cost of some of the more expensive cars. But though the layman may not be able to appreciate it, there is a legitimate difference in cost between cars which are apparently alike in design and construction, which is easily accounted for by expenses due to the administration of the plant where they are produced, and is fully justified in the performance of the vehicle.

Thoroughgoing inspection of every part, extending not simply to the independent components, but repeated after they are assembled, constitutes an element of expense which is by no means inconsiderable in comparison with the total cost of producing the car, and which also more than pays for itself in the long run. The use

of high grade materials taken, not upon trust, as it were, but upon the expert recommendation of specialists in the employ of the maker constitutes another item of producing cost, not apparent in the product. The maintenance of chemical and physical laboratories for the purpose of qualifying every item of stock used in the car is no mean factor in building the high price of a first-class car, nor in contributing to the value which that price ensures.

Again, the treatment of these high grade materials by high grade processes demands a big plant and skilled operatives. Systems must be worked out, provision made for attending to every little detail in a thorough and practical manner. Systems ensure successful results, but they are expensive. It costs a good deal just to run the establishment which is equipped to turn out really excellent cars in significant numbers.

These various items are entirely in excess of the costs involved in producing cars along less conscientious and restricted lines. They multiply with great rapidity and mount up to an astonishing degree. That this addition to what might be called the basic cost of a car of certain stated specifications is a legitimate addition-that it is repaid in lower depreciation, increased serviceability and reduced cost of maintenance, is proved in a goodly number of concrete examples of such first class productions as have rescued the name of the American manufacturer from the reputation of shoddy workmanship which it used to hold among motor car builders and owners the world over.

High selling cost is not in itself a criterion of merit in motor cars any more than it is in furniture or clothing or tinned meat. The purchaser in order to invest wisely must exercise a certain amount of discrimination founded on the nature of the machine and its reputation. But he must be made to understand that there is a proper reason for the high price asked for really high grade cars.

The Anti-American Program.

The action of the disgruntled Automobile Club of America, of New York City, in deciding to conduct a race for foreign cars on American soil in opposition to the Vanderbilt cup contest immensely simplifies the situation.

It will range on one side all those who are of America and for America and Amer-

ican institutions, and on the other side all those who are against them.

The more-than-ever misnamed Automobile Club of America, so long dominated by an alleged American who is, or tries to be, Frenchier even than a Frenchman, is but proving true to its previous inclinations. It stands as the best friend the foreigners and foreign manufacturers ever possessed on this side of the water. It is no wonder that the foreign organizations have fallen over themselves in making haste to applaud the stand of the A. C. A. Not to do so would be to be guilty of the blackest ingratitude. Next to the Automobile Club of America, the "lovliest" specimen of American sportsmanship is disclosed in the Savannah Automobile Club, which wants a race so badly that it will turn any sort of a flip-flop, or carry water on either shoulder, or train in any old company in order to obtain it. If the Automobile Club of America's Hessian race on Georgia soil proves as successful, financially and otherwise, as the foreign shows that were held in New York, the Savannah club will reap its just reward.

With the issue so dearly defined and the line so sharply drawn, the American sportsman or American manufacturer who lends countenance to the A. C. A.'s mischief-making program deserves to be viewed askant. He is either hard pressed to obtain undesirable glory or doubtful publicity. It is perfectly plain that all who compete in the A. C. A. contests thereby will become "outlaws" of sport. The number of such "outlaw" movements which have succeeded can be numbered on the fingers of one hand without counting the thumb, and if the support of even the bemillioned head of the steel trust, prompted by men with grievances and bolstered by salaried employes who must needs find work to do, can establish the A. C. A. brand of outlawry, it will be strange indeed. When such movements peter out, usually, the only men who suffer are the misguided dupes who merely serve as the chess-pieces for the disgruntled chieftains. So far as concerns automobile sport, there are so many poor devils who are not their own masters, and who must needs compete when ordered to compete, or lose their jobs, that the A. C. A. breed of outlaw will be more pitiable than usual. The head of the steel trust might at least start a pension fund for the poor fellows who "don't know where they're going, but who are surely on the way"-to

COMING EVENTS

June 4, Trenton, N. J.—Mercer County Automobile Trade Association's 200 miles sealed bonnet reliability run.

June 5, Jamaica, N. Y.—Long Island Subway Celebration Committee's one mile record trials on Hillside avenue.

June 6, Williamsport, Pa.—Williamsport Automobile Club's hill climbing contest.

June 6, Worcester, Mass.—Wörcester Automobile Club's annual climb up Dead Horse hill.

June 9, New York City—Orphan's Day Automobile Committee of New York's annual parade of orphans.

June 13, Cleveland, Ohio—Cleveland Automobile Çlub's annual hill climb.

June 13, Philadelphia, Pa.—Quaker City Motor Club's race meet at Point Breeze track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

June 18, Washington, D. C.—Washington Lodge of Elks' race meet at Bennings track.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 4, Lowell, Mass.—Lowell Automobile Club's 250 miles road race on Merrimac boulevard.

July 9. Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

have the brand of spurious sportsmanship placed on their backs.

The spectacle of a big club, officered by grown men, so plainly acting first the part of a small boy who "won't play," and then the part of dog in the manger, is a spectacle not often afforded.



EXCITING SPURTS UP SPORT BILL

Poole Breaks Records at Bridgeport's Annual Climb—Coffey's Daring Drive—
Thrills for 10,000 Spectators.

Breaking all records for the course "Al" Poole, who first became known as the mechanic of Joseph Tracy, and who later was given a wheel position on a foreign car, won and received just as many cheers when he piloted his Columbia car across the finish line in 1:194%. Coffey's splendid driving and the reckless abandon with which he slewed around the curves were bright features of an unusually well-managed and exciting hill climb.

To begin with there were something like 10,000 people out to see the cars scramble uphill, and despite the immense human outpouring there was not the slightest trou-

of the Sport hill climbs, and the Bridgeport Club deserves more credit than usually is given to promoting organizations, for the admirable manner in which all the minutest details were attended to. Referee A. L. Riker was about the busiest man at the course and—his face was clean. Not that this is an unusual thing with Mr. Riker, but the Locomobile's designer had spent several days on the course superintending the oiling of it, and as many times he had to



1. VIEW OF THE COURSE AT SPORT HILL

2. VARIED ASSEMBLAGE OF VEHICLES

3. SCHNE AT THE FINISH

the Board of Trade cup and scored the fastest time of the day in the third annual hill climbing contest promoted by the Automobile Club of Bridgeport, held on Sport hill, Easton, Conn., last Saturday, 30th inst. Poole covered the mile of stiff grade, studded with treacherous hills, in 1 minute 17 seconds, lowering by 7½ seconds the record made over the same course last year by Tracy. Without taking any credit from Poole it can be said that John J. Coffey. of Hartford, earned just as much glory

ble in keeping the course clear for the racing machines. Due to the business-like methods employed by the Fourteenth company of the Coast Artillery, which patrolled the course, this part of the program left nothing to be desired. The crowd seemed to respect the uniformed soldiers with their rifles and usually a request was sufficient. The politeness of the guardsmen was a sharp contrast to the irritating officiousness that marked the late Briarcliff race.

The third annual was the most successful

jump in and assist in the work, by Friday night his face looked as if he had driven through a cup race over oiled roads. After the finish of the meet on Saturday Riker was noticed loading a big car with camp chairs like any \$2 a day truckman. The only man that didn't overwork on Saturday was good-looking Ralph M. Sperry, chairman of the contest committee. Sperry was snugly entrenched on the bank near the "S" turn. It may have been the fact that he wasn't alone that caused him

to look so happy, for it is a fact that he was entirely oblivious to the passing of the sputtering record-breakers, but as Sperry had worked early and late on the preliminaries he was entitled to a day off.

An effort was made to separate the spectators from their loose change by charging \$1 for grandstand seats at the finish, but when the events were half over and the price had come down to 25 cents there still were no takers. One man who had a parking space below the starting point didn't catch a victim either. The only people that made money parking cars were those who rented space for the benefit of the painting fund of the Easton Methodist church. Judging from the sale of \$2 spaces the church will get two or three coats of protection against the elements.

The crowds began to assemble at the course from the first peep of dawn and although the fog-blanketed hills gave rise to dubious forebodings there were at least 10,000 people at the course when the first event was started at 8:30 o'clock, and from then until noon there were no tiresome waits. While of course, there were crowds at both the starting and finishing points the largest collection of spectators was massed at the double "s" curve half way up the incline. This was the danger point, but as is usually the case when accidents are looked for, they characteristically refused to happen. Of the many spectators who reached the course in their own conveyances, not all came in motor vehicles. There were many horse drivers present and they lined up with their teams at various points of vantage.

It was just 8.30 when the starter gave the word to W. Pollard, Maxwell, in the first event, for cars selling at \$850 and under. Pollard climbed the hill in 2:05%, and Frank Dunnell, Ford, who followed, was timed in 2:33. The Maxwell was protested but later it was withdrawn. These were the only two starters and in the eventwhich followed, for cars listing between \$851 and \$1,250, there were the same number, the event going to Brockwell, who drove an Overland to the finish line in 1.431/5. Robert Burman, Jackson, won in the class for cars listing between \$1,250 and \$2,000. C. B. Tiley, in a car of his own construction, had a walkover in the \$2,001 to \$3,000 class.

The first excitement came in the runabout class from \$2,001 to \$3,000. Up to that time the drivers had been exercising great care, particularly on the double "S" curve, but when Harry Tuttle cut loose and covered the distance in 1:29, the succeeding drivers took heart and let their cars out all the way. The excitement began to increase in the class for cars selling at \$4,001 and over, which was for the H. D. Miller cup, and when Poole scurried up the incline in 1:20 the crowd cheered him. This was the fastest time in the event, and the best performance up to that time. Poole's Italian car was protested,

however, the claim being made that it is, not a stock car and the cup is held up pending a comparison of the catalogue specifications with those found by the contest committee. If Poole is ruled out the cup will go to C. F. Alcott, Stearns, who made the next best time of 1:23.

Young Kenneth McNeil, a son of Senator McNeil, got a big hand when he started in the amateur class for the Craufurd cup. McNeil handled his car like a veteran and captured the cup easily in 1:203/2. J. Doig in the same kind of a car was second in 1:22.

Naturally the most interest centered in the free-for-all, in which several big cars had been entered, including the winner of the Briarcliff eup race. It failed to show well, however, making the next to the slowest time in a field of nine starters. Eltridge, the driver, said a gracked admission pipe slowed his time considerably. The event went to Poole, who covered the uphill mile in 1:17. However sensational Poole's run was, Coffey's was even more so. Coffey drove a light Columbia, stripped "to the waist," and its lightness caused the spectators some uneasiness on the whirlwind run. At the first turn just beyond the start were gathered some 200 spectators and most of them had crowded up to the guard rail. The stripped Columbia skidded badly at this point and there was a rush away from the spot, until Coffey had passed in safety. At the double "S" turn Coffey gave the crowd another scare, but he continued without slowing down and as a result finished only 21/5 seconds slower than the imported winner of twice the horsepower. William Watson, in the Briarcliff Simplex, was third in 1:203/5, and popular Harry Tuttle, Stoddard-Dayton, finished fourth, his time being 1:213/5. The sum-

Cars \$850 and Under.
W. Pollard, Maxwell 2:05% Frank Dunnell, Ford 2:33
For Cars \$851 to \$1,250.
Brockwell, Overland
Cars \$1,251 to \$2,000.
R. Burman, Jackson 1:3946 Brockwell, Overland 1:46 K. R. Manville, Palmer-Singer 1:51 A. L. Kull, Aerocar 1:5746
Gasolene Touring Cars, \$2,001
to \$3,000.
C. B. Tiley, Tiley 1:54%
Runabouts, \$2,001 to \$3,000.
Harry Tuttle, Stoddard-Dayton 1:29
Dunnell, Knox
J. W. Swan, Corbin
J. W. Swan, Corbin
I. W. Swan. Corbin 1:5134
 J. W. Swan, Corbin
J. W. Swan, Corbin

C. E. Bedford, Stearns 1:37 3/5
W. Shaw, Peerless 1:40%
Craufurd Cup for Amateur Drivers.
Drivers.
Kenneth McNeil, Stearns 1:201/5
J. Doig, Stearns 1:22
Tuttle, Stoddard-Dayton 1:223/5
H. Swain, Stearns 1:23½
Alcott, Stearns 1:25
N. W. Bishop, Simplex 1:2645
J. S. Joyce, Locomobile 1:27 1/25
R. Lord, Peerless 1:303/5
Bedford, Stearns 1:36\%
C. A. F. Phizenmaier, Locomobile 2:373/5
Free-for-All, Bridgeport Board
of Trade Cup.
Al Poole, Isotta 1:17
J. I. Corey, Columbia 1:1945
Wm. Watson, Simplex 1:201/5
Harry Tuttle, Stoddard-Dayton 1:21%
Alcott, Stearns
. 00.2
Busitesice ve, Bosomobile viviet in the same
Clam Eltridge, Isotta: 1:3245
Burman, Jackson 1:3645

Endurance Run to Benefit Orphans.

At a meeting last week of the Automobile Club of Hartford, Conn., it was decided to use the funds accruing from the endurance run for the purpose of giving an automobile outing to the children of the Hartford Orphan Asylum and kindergarten for the blind. As the club's endurance run was never intended as an event from which to earn a profit it was thought that no better use could be made of the funds than to utilize them in this way. So on June 13th, fifty automobiles loaded with children will run to some nearby park where a picnic will bring happiness to the little ones.

Connecticut Clubs May Amalgamate.

It is possible that the New Britain (Conn.) and Hartford Automobile Clubs may amalgamate. At a recent meeting last week of the New Britain club the question of consolidation was discussed, and it was determined that if the local club should not develop greater strength it would be advisable to join with the Hartford organization under the name of the Automobile Club of Hartford County. At the meeting it was decided that unless the right man can be found to build up the club, the consolidation will be effected.

Rockville Organizes a New Club.

An automobile Club has been organized in Rockville (Conn.) The officers are: President, George E. Sykes; vice-president, William Maxwell; secretary and treasurer, Lebbens Bissell. The club probably will hold a hill climbing contest during Old Home week.

Granville Club Effects Reorganization.

The Granville (Vt.) Automobile Club was reorganized last week, electing the following officers: President, F. T. Pember; vice-president, Dr. J. H. Collins; secretary, E. W. Wyman; treasurer, H. Van Derwater; corresponding secretary, Mrs. Charles Mosier.

"COING SOME" UP GIANT'S DESPAIR

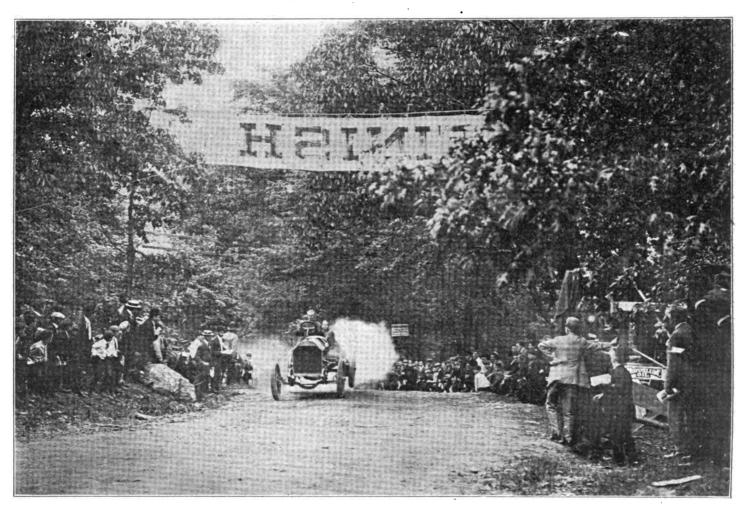
Wilkes-Barre Hill Climb Marked by Thrilling Contests and Broken Records— Haupt's Marvelous Time.

Despite moist leaden skies and a shower which fell after the sport had commenced, a monster crowd numbering about 40,000 witnessed the annual hill-climb up Wilkes-Barre Mountain, sometimes known as

When it is considered that the course rises 690 feet in a mile, that it has a grade of from 10 to 23 per cent., and that it is a continuation of zig-zaggy double "s" curves from start to finish, it will be seen that 1:38% is "going some," and following this line of reasoning it is not surprising that the Wilkes-Barre miners could not suppress a cheer when Haupt skidded around the oiled curves on two wheels.

The meet was filled with thrills, but fortruately there were no serious accidents to left in the event. These were Bitner's Rambler and Lengle's Acme. The latter won easily, but was protested, the claim being made that the Acme had no stock catalogued at less than \$3,000, whereas this class was for cars under \$2,000. Then to keep the protest ball rolling, Gilbert H. Smith protested the Pennsylvania Vanderbilt car in the event for cars between \$2,001 and \$3,000. The justice of the protest was admitted and the entry was withdrawn.

To add to the complications, many en-



WILLIAM HAUPT (CHADWICK) LITERALLY BOUNDING TO VICTORY-REAR WHEELS IN THE AIR

Giant's Despair, on Saturday last, Decoration Day, the meet was attended with as much success as the successful event a year ago.

The meet was marked by the breaking of several records made in the last climb. William Haupt, a Philadelphia young man who piloted a six-cylinder Quaker-made car was the hero of the day. He won the free-for-all and then in a special time trial covered the 6,000 feet of winding mountain road where the grade at one place is 23 per cent., in the marvelously fast time of 1:38%. This is at the rate of more than 41 miles an hour. The best previous time, 1:494%, for an automobile was made last year by Walter C. White, while the record for the course stood at 1:40, made by a monster 14 horsepower motor bicycle.

the cars and no person was injured among the drivers or spectators. The course was in excellent condition.

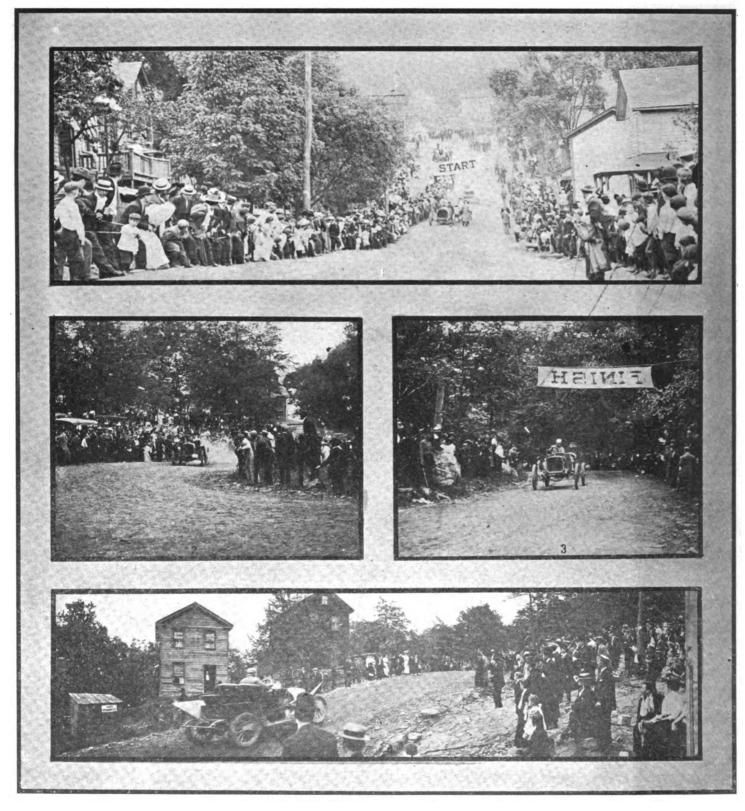
A. A. Jones, in a Ford, started the ball rolling in the event for gasolene cars under \$850, and he reached the summit, Prospect Rock, in 3:1936. After Jones had made his climb a crowd of about a thousand persons poured onto the road from an excursion train and delayed proceedings for a while. Charles Fleming, Maxwell, then made the run in 3:2236.

The fun began after Jones had trimmed Fleming, and R. Jackson enjoyed a walk-over in the second event. With the calling of the third event the announcement was made that the Corbin had been scratched, and when Berger stalled his Oldsmobile at the Devil's Elbow turn there were only two

trants were inclined to question the right of the referee to award medals in two classes where there was but one entrant, who was thereby assured of a walkover. Later the announcement was made that the promised first prizes would be awarded to the walkover participants.

At this point it was announced that the free-for-all would be held and a mix-up was occasioned that kept the Stoddard-Dayton out of the open event for cars between \$2,001 and \$3,000. The driver was informed that the event was to be postponed and so he left the course. When Referee Morrell changed his mind suddenly, as he frequently has been known to do, and ordered the events to be run according to schedule there were only two starters ready for the event, a Thomas-Detroit and a Corbin. It went

SCENES IN THE WILKES-BARRE HILL CLIMB.



- 1. THE STIFF GRADE AT THE STARTING POINT
- 3. JOHN DOWNER (CORBIN) IN A WINNING FINISH

- 2. DEVIL'S ELBOW. ONE OF THE ZIG-ZAG TURNS
- 4. WHIRLING AROUND A SHORT CURVE

to the former in 2:1915. The next event was a welkover for S. H. Hancock; and C. A. Ward, Matheson, got a medal just after in the same manner.

Interest began to increase in the event for six-cylinder cars when Hancock ran his Stevens-Duryea up the hill in 2:08½, and Haupt followed in 1:5735. Here was a real contest at last, and it proved to be when Robinson in the big Stevens romped up in 1:52, the fastest time up to that point, breaking the record for gasolene cars made last year. The free-for-all brought out two or three big cars and Haupt in his

Great Chadwick, ran away with the race in 1:41%. Just as much interest centered in the race for cars of the Briarcliff type and this was one of the closest contests of the day, John Downer, in a Corbin, winning a popular victory when he defeated Hoffman in a Stearns, by 2½ seconds.



Haupt made his sensational run in the time trials when he covered the distance of more than a mile in 1:37%. C. A. Ward, in a Matheson "Big Six" set out to put Haupt's performance in the shade, but a flat tire caused him to ditch near the Devil's Elbow. The various sections for the Quaker City drivers were won by Marriott, Stanley; Longstreth, Maxwell, and Zengle, Pennsylvania. The summaries:

Pennsylvania. The summaries:
Gasolene Cars Not Over , \$2,000.
1 E. Lengle, Acme
Gasolene Cars Not Over \$3,000.
1 P. W. Miller, Stoddard-Dayton 2:14% 2 O. Light, Thomas-Detroit 2:18 3 John Downer, Corbin 2:24 4 Tom Berger, Oldsmobile 2:303% 5 Leonard Zengle, Pennsylvania 3:29% Gasoline Cars, \$2,001 to \$3,000.
1 O. Light, Thomas-Detroit 2:191/5 2 John Downer, Corbin 2:451/5
Gasolene Cars Not Over
\$4,000. , 1 S. H. Hancock, Stevens-Duryea 2:17
Gasolene Cars, 4-Cylinder, Not Over \$4,000.
1 C. A. Ward, Matheson 3:143/5
Gasolene Cars, 6-Cylinde-r, \$2,500 or Over.
1 P. J. Robinson, Stevens Duryea . 1:52 2 William Haupt, Great Chadwick . 1:57 3/5 3 S. H. Hancock, Stevens-Duryea 2:08 1/5 4 J. Deatriel, Matheson 2:38 1/5
Gasolene Cars Under \$850. 1 A. A. Jones, Ford
2 Charles Fleming, Maxwell 3:22% Gasolene Cars Not Over
\$1.250
1 R. Jackson, Mitchell
2 P. J. Robinson, Stevens-Duryea. 1:49 3 Fred Marriott, Stanley 1:573/5 4 D. Walter Harper, Stanley 1:593/5 5 John Downer, Corbin 2:11/5 6 O. Light, Thomas Detroit 2:15 7 C. A. Ward, Matheson 2:183/5
Briarcliff Type Stock Chassis: 1 John Downer, Corbin
1 William Haupt, Great Chadwick 1:38 1/2 C. A. Ward, Matheson Ditched Quaker City Motor Club— Steam Cars.
1 Fred Marriott, Stanley 1:56 2 D. Walter Harper, Stanley 2:01 1/5 Quaker City Motor Club— Cars Costing \$2,000 and Under.
1 W. C. Longstreth, Maxwell 2:491/5 2 T. W. Berger, Oldsmobile 3:14
Quaker City Motor Club— Cars Costing Over \$2,000.
1 L. Zengle. Pennsylvania 2:101/2 2 William Haupt, Great Chadwick Ditched

CEDRING'S UNDERSTUDY A WINNER

Brown Makes Fastest Time in Yale Hill Climb — Swan Makes Next Best Times in Three Events.

David Bruce Brown, a young New York amateur who has been understudying the late Emmanuel Cedrino, made the fastest time in the hill climb conducted by the Yale Automobile Club at the Shingle hill, near New Haven, Conn., Wednesday of last week, 27th ult. Brown covered the mile incline in 1:06-1/5, in the class for cars with cylinder capacity between 400.1 to 550 cubic inches. Cedrino who, a few days later was killed in an accident at Baltimore, rode as his mechanic and was to have driven the Fiat car in the free-for-all, but a mishap put him out of the running.

The Yale meet was one of the best ever held in New Haven; it attracted about 5,000 people to the rock-bound course. Every car was at the tape on time and after the first delay, when the spectators crowded on the course and were only cleared off when it was announced that the contest would be called off unless the road was cleared, everything proceeded without a bitch

The first event was for cars with cylinder capacity up to 200 cubic inches and this was won easily by T. C. Walker, Ford. W. A. Burke, Knox, scored a popular victory in the class for cars with cylinder capacity between 100.1 and 400 cubic inches, when he romped up and around the three curves in the fast time of 1:121/5. The nearest approach to this time in this event was made by H. Tuttle, Stoddard-Dayton. In the free-for-all, Burke ran a close second to W. W. Swan, whose Stearns was timed in 1:10. Burke's time was 1:113/5. Swan won the class for big cars in 1:15%; J. S. Joyce, Locomobile, was second. W. A. Maynard drove a Thomas Forty to victory in the class for touring cars, fully equipped, having a cylinder capacity not greater than 550 cubic inches. J. W. Matthews, Stevens-Duryea, was second in 1:321/5, and R. B. Stern, Fiat, got third place.

Gasolene Cars with Cylinder Capacity up to 200 Cubic Inches, Inclusive.

1 T. C. Walker, Ford 1:30½

Gasolene Cars with Cylinder Capacity from 400.1 to 550 Cubic Inches, Inclusive. David Bruce Brown, Fiat 1:0645 2 W. W. Swan, Stearns 1:0845 3 F. B. Whittemore, Itala 1:1435 8 H. Tuttle Stoddard-Dayton . . . 1:20 9 W. A. Wickwire, Stod-Dayton . . 1:24% 10 F. E. Bowers, Rambler 1:263 Gasolene Cars with Cylinder Capacity Above 550 Cubic Inches. W. W. Swan, Stearns 2 J. S. Joyce, Locomobile 1:15% 3 R. Lord, Peerless Six 1:15% 4 Felix Prossen, Bianchi 1:15% 5 F. B. Whittemore, Itala 1:1545 Gasolene Touring Cars Carrying Full Equipment and Having Cylinder Capacity not Exceeding 550 Cubic Inches. 1:35½ 4 W. C. Pratt, Columbia 1:361/5 Free-for-All 1 W. W. Swan, Stearns 1:10 2 W. A. Burk, Knox 1:113/5 3 Egbert Lillie, Itala 1:124/5 4 J. R. Johnson, Jr., Locomobile 1:14 5 J. S. Joyce, Locomobile 1:161/5 6 J. W. Swan, Corbin 1:184/5 7 H. Tuttle, Stoddard-Dayton 1:192/5

Mischievous Kids Kid Motorists.

Two New York youths whose combined years were about equal to the number necessary to arrive at the age of discretion had a lot of fun with automobilists one evening last week. They stationed themselves in the shadow of a tree on the driveway to Coney Island and whenever a car or motorcycle passed that was going even a little bit, one of the jokers blew a shrill blast on a whistle and they found their amusement in watching the effect. As the conspirators were in the dark the motorists could not see that they were being hoaxed, and fearing that they were exceeding the speed limits they immediately slowed down.

First Air Cooled Car at Brooklands.

What evidently is to be considered as something of an event, will be the first appearance on the Brooklands motordrome of the first air-cooled car to be raced on the huge course, which is to occur shortly. It goes almost without saying that the machine to receive this distinction is of American manufacture. It is a Frayer-Miller belonging to Jack Darwen, of Bromley.

Bliss at Head of Malden Club.

At its annual meeting the Malden (Mass.) Automobile Club elected the following officers: President, Alvin E. Bliss; vice-president, Willard E. Robinson; treasnrer, Albert B. Tenney; secretary, Herbert A. Gidney; board of governors, L. L. Libby, R. C. Guptill, Philip V. Mingo, John B. Robbins, W. S. Hopkins, G. E. Hanscom, J. W. Maguire.

PIMLICO MEET A DISAPOINTMENT

Walkovers and Runaways Characterize the Events—Fence Plunging Act in 100-Miles Race the Only Thriller.

Whether it was the unfortunate accident to Cedrino the day before, or just because the events were rather uninteresting, or both, at any rate something put a damper on the meet conducted by the Motor Car Racing Association at Pimlico track, near Baltimore, on Saturday last, 30th ult. To be sure, the crowd was large, numbering about 5,000, but they did not warm to the events, most of which were uninteresting runaways. One fence-plunging act, entirely impromptu, and the excitement afforded by a good motorcycle race, were the only features to partly repay the large crowd for the money it had expended.

In the first event, for stock touring cars selling from \$2,000 to \$3,000, there were only two starters. One of them broke down in the first mile, leaving the other to finish the remaining four miles alone. In the second event, a so-called Maryland runabout championship, there were three starters, but one of them lost a tire in the first mile and the other fizzled discouragingly so that there was only one car going fast at the finish. In another race at five miles only one car started and, of course, this was highly interesting. In the 10 miles handicap the scratch car caught the long markers in three miles, loafed behind them for three miles more and then came through and won by a mile.

The only events resembling races were the motorcycle handicap and the 100 miles "championship" for stripped cars, but as the winner in this latter event led from start to finish and finished 19 miles ahead of the second car, it cannot be said that this race was terribly exciting. The one bit of excitement occurred in the latter minutes of the race when J. S. Price, Acme, plunged through the fence, following the bursting of the right rear tire. Lineau, the mechanic, was thrown out, but escaped with a slightly cut chin, while Price was not even unseated, bringing his car to a standstill. E. L. Leinbach finished first and Robert Morton second, third place being awarded to Price.

As usual, the motorcycle race furnished the interesting part of the program, and the event would have been closer had not the starter held "Chic" Thomas, the scratch man, considerably longer than was necessary. The result was that Matthew Gault, on a five horsepower twin Indian, rode so fast that Thomas could make but little gain on him. Gault soon left Cook, his co-marker, behind, and then started after the long markers, passing the last on the turn into the stretch of the last mile. His time was 6:31. The summaries:

Five miles for stock touring cars selling from \$2,000 to \$3,000—Walkover for A. L. McCormick, Oldsmobile. Time, 6:21.

Ten miles for Maryland runabout championship—Won by Robert Morton, Pullman; second, Charles B. Kirkman, Pullman. Time, 11:454.

Five miles for cars from 40.1 to 60 horse-power, inclusive—Walkover for E. L. Leinbach, Stearns. Time, 5:31%.

Ten miles free-for-all handicap—Won by E. L. Leinbach, Stearns (scratch); second, Robert Morton, Pullman (23 seconds); A. L. McCormick, Oldsmobile (45 seconds), third. Time, 11:07.

One hundred miles championship for stripped cars—Won by E. L. Leinbach, Stearns; second, Robert Morton, Pullman; third, J. Price, Acme. Times, 2:00:47 and 2:30:47.

Five miles motorcycle handicap—Won by Matthew Gault, Indian; second, W. F. Fisher, Indian; third, Chic Thomas, Indian. Time, 6:31.

Two New Clubs in Minnesota.

In the last two weeks two new automobile clubs have been added to the roll of the Minnesota State Automobile Association and the American Automobile Association. The Brown County Automobile Club and the Kenyon Automobile Club have been organized and have affiliated with the State and the National organizations. The officers of the Brown county club are: President, Dr. O. C. Strickler; secretary and treasurer, H. G. Bingham; board of directors, Dr. E. Mueller, Henry M. Somsen, W. G. Frank, Ernest Aatternott; state director, Joseph Bobleter. The officers of the Kenvon club are: President, Dr. E. H. Marshall; vice-president, R. Leland; secretary and treasurer, Jay H. Held; board of governors, Albert Molin, Dr. A. J. Gates, E. G. Held, and N. W. Fox; state director, Arthur Bulong.

Physicians in the Oranges Form a Club.

With 40 members, the Physicians' Automobile Association of the Oranges has been organized by the medical men residing in that group of New Jersey towns embracing the Oranges. The officers chosen are: President, Dr. Edgar Calvin Seibert, of Orange; vice-president, Dr. Palmer A. Potter, of East Orange; secretary, Dr. Stephen G. Lee, of East Orange; treasurer, Dr. Arthur W. Bingham, of East Orange; governors, Dr. Thomas H. Harvey, of Orange; Dr. Mefford Runyon and Dr. Richard D. Freeman, of South Orange.

New Haven Automobilists Organize.

With Thomas G. Bennett as president, Jacob P. Goodhart vice-president, Amos F. Barnes secretary, and William H. Douglass treasurer, the New Haven Automobile Club has been formally organized. It is now a live association with a representative membership, a standard constitution and set of by-laws.

CEDRINO KILLED AT BALTIMORE

His Practice Spin on the Pimlico Oval Ends in Disaster—Collapsing Wheels Hurl
Him to His Death.

Emmanuel Cedrino, one of the best known Italian drivers in America, was instantly killed at the Pimlico track, Baltimore, last Friday, 29th ult.. while practising on the mile oval in preparation for the races that occurred the following day. The accident happened late in the afternoon, and Cedrino's car was the only one on the track at the time.

Cedrino wanted to try out the track before the races and it was late in the afternoon before he started on a practice spin.
Then he jumped into the car while his little brother, Matteo, got into the judges'
stand with a stop-watch, prepared to take
the time. He had covered three miles in
fast time and was just opposite the eighth
post on the fourth mile, when there was a
crash and the car lurched to the right, with
the right front wheel smashed to pieces.

With one hand tightly clutching the steering wheel, Cedrino reached for the clutch with the other, but he was too late. The impetus was tremendous and the powerful car leaped on its way, bumping once as the other front wheel collapsed. It was all over in an instant. With the front axle digging into the hard ground the car stood up on end and turned turtle. As it came over Cedrino was catapulted forward and he landed on his head. There was a shriek from the young brother Matteo as he and the few people at the track rushed toward the tragic spot. One glance at the mangled body of the Italian driver was sufficient. At Coroner Hollyday Emich's inquest a verdict of accidental death was given.

Cedrino has been a prominent figure in racing circles since 1904, and held several track records in this country. Before coming to America he was the head chauffeur for the Queen of Italy. His first noteworthy achievement in America was at Long Branch on August 22, 1905, when he set up a track record of 53:14% for 50 miles. He drove a car in the Vanderbilt cup race in the following October, but was put out of the running. At the last Florida beach meet he set up a record of 3:53:44 in the 300 miles race. He held all the track records for middleweight cars, from 1 to 15 miles, inclusive. He was generally regarded as a careful, though nervy driver. He had occasional mishaps, but never lost his nerve.

Emmanuel Cedrino was born near Turino, Italy, 29 years ago, and it is understood that his remains will be sent to the land of his birth for final interment. Cedrino was married about two years ago and leaves a widow and a young daughter.



DENVER RACE DEVELOPS HEROISM

Matthewson Wins in Long Grind on Rugged Roads—De Gaston Endures Torture in Struggle for Victory.

E. Linn Matthewson, driving a Thomas Forty, won the big 320 miles road race near Denver, Col., on Decoration Day, 30th ult. Matthewson covered this distance over a ten lap course of rough country in 8 hours 25 minutes 38 seconds, an average of 38 miles per hour. Albert DeGaston, in a Locomobile, finished second, but his time was not taken for the last lap. G. A. Clarke, in a Great Smith car, was awarded third place, as he was the third and only remaining one still running at the finish, from a field of eight starters. Matthewson has been protested by De Gaston, it being claimed that his winning car is not a stock model, which was one of the requirements of the race, and the protest will be referred to the American Automobile Association for decision.

It is doubtful if any sporting event ever held in Colorado ever attracted a greater concourse of people than did the automobile road race on Decoration Day. While it is impossible to exactly estimate the crowd of spectators that watched the race from different vantage points around the 32 miles circuit, expert figurers agree that there were more than 40,000 people on hand.

The start and finish was at the Model road house, some miles northeast of Denver, and the course extended over an ordinary and rough country road to Barr, crossing the railroad tracks twice in that stretch. From Barr it wriggled through the K. and P. ranch and over the low and excessively muddy region to the Brighton road, where it went through the town and across the Union Pacific tracks again. From Brighton the road extended through a sand bed, nearly hub deep, on to Henderson, Hazeltine and Adams, and then back to the starting point. Despite its tortuousness Loyern in a Thomas Sixty made the fastest lap of the course, covering the rough 32 miles in 45 minutes 2 seconds. Lovern, however, was unfortunate in wrecking his car in the sixth lap.

The race started promptly at 8 a. m., eight cars being sent away at intervals of

four minutes, as follows: 1, Brinker, Colburn; 2, Eubanks, Studebaker; 3, Clow, Colburn; Lovern, Thomas; 5, Matthewson, Thomas; 6, Clarke, Great Smith; 7, De Gaston, Locomobile; 8, Sanford, Thomas. Two of the original entries failed to start.

De Gaston, in the Locomobile, made the fastest run in the first lap, his time being 45:11, with Matthewson a close second in 45:30, and in point of time De Gaston led at the ending of the second lap. In the third lap, however, the exhaust pipe in some manner became loose and as the gases were escaping within the hood, De Gaston ripped the latter off. From that time until the finish of the ninth lap, plucky De Gaston had to breath the exhaust gases, and to further add to his discomfiture, the radiator became loose and permitted the hot water to splash over his face. There are very few men that would have stood this for seven hours-De Gaston was one of the few. He was in the race to win, and his pluck and nerve deserved a first, although he only got second. Alfred Longworth, his mechanic, also showed great pluck. At the finish of the long ordeal the skin on De Gaston's face hung in blisters, but the plucky young Frenchman was cheerful about it, forgetting his own injuries to praise his mechanic and to challenge Matthewson to another race.

Matthewson, the winner, drove a remarkable race and stopped only long enough to change tires. He started sixteen minutes behind the first car, but passed it in the first lap and from then until the finish kept the nose of his car in front. Matthewson is an experienced road and track driver and is expected to pilot one of the Thomas cars in the next Vanderbilt cup race. His mechanic was Harry A. Ball, only 19 years of age, but who rode like a veteran, and materially assisted Matthewson to win a great race. Several times when they struck the mud holes and water puddles Bell would take his coat and shield Matthewson's face to prevent the mud from flying in his face. Matthewson took a blind man's chance, but was lucky.

The Great Smith car was still in the running when the race was stopped and it was awarded third place. It had been having magneto trouble but was still gamely limping along. The others were all out, however. Brinker's Colburn was the first to dropout, as it developed leaky valves in the third lap, after covering the second in the

slow time of 1:21:39. In this lap also Sanford's Thomas cracked a cylinder and was withdrawn. There were no more accidents until the sixth lap when a mile north of Barr a tire on Lovern's Thomas gave way and the car ran amuck, overturning. Lovern and James Clock, his mechanic, were both thrown from the machine but escaped with slight injuries. The car was damaged too badly to proceed.

This left five cars in the race, but two others soon were put out of the running. Eubanks was pushing the Studebaker along at a mile a minute speed to make up lost time when an overheated journal brought him to a quick stop and a lap later the other Colburn car retired with a broken axle.

Road Race and Meet at Ogden.

Although it was not advertised beforehand it seems that somebody or other had an automobile road race and track meet at Ogden, Utah, on Decoration Day. A ten mile course from the Ogden river bridge to the Utah Hot Springs was the avenue in the morning and the road race was won by Harmon Perry, who covered the distance in 13 miutes 30 seconds. L. H. Beecraft was second in 14:00, and William Eccles failed to finish. Nine drivers stared in the ruabout class over the same course and the victory went to J. C. Jensen who finished in 15:45. Horace Peery was second in 16:30, William Ure third in 17:00, Archie Browning fourth in 17:30 and N. A. Gay brought up the rear in 18:30, the others failing to finish. A. E. Hyde, of Salt Lake City, made a ten miles trial over the same course and finished in 12:25. He drove a Pope-Toledo. At the meet at the Wasatch driving park in the afternoon L. H. Beecraft won both the five and ten miles events. The times are not given.

Readville Meet Postponed to June 17.

Rain caused a postponement of the Readville meet of the Bay State Automobile Association scheduled for Decoration Day. The track had been oiled in the morning and when the shower came up in the early afternoon the oil prevented the water from soaking in. Several of the contestants drove slowly around the track but declared it unsafe for speeding so the meet was postponed until June 17th, "Bunker Hill Day," when a crowd may be expected.

SUMMARY OF THE DENVER ROAD RACE.

•			 	Time	by Laps				
Drivet and Car. 1 Matthewson, Thomas Forty 2 De Gaston, Locomobile 3 Clarke, Great Smith Clow, Colburn Eubanks, Studebaker Lovern, Thomas Sanford, Thomas Brinker, Colbutn	1 45:30 45:11 56:46 51:08 52:57 57:00 45:48 49:55	2 51:40 46:04 67:17 50:03 70:14 *45:02 45:37 81:39	4 50:40 55:39 56:25 49:55 57:44 45:38 ed cyline g leak in	5 55:00 71:03 58:09 75:42 56:57 97:48 der.	6 7 40:16 51:3 72:37 69:5 64:14 137:1 59:15 53:5 59:22 73.0 Wrecked.	8 2 49:35 7 70:04 3 Flagge 2 72:03	9 50:51 64:12 ed. Broker eated jou	ı axle.	Total Time. 8:25:38 not taken

^{*} Fastest lap.



THROUGH 249 MILES OF MUD

Minneapolis Endurance Run Results in Only
One Perfect Score—Thirteen at the
Finish on Friday.

Over roads that were just a little bit better than no roads at all, 13 cars finished the two days' endurance run of the Minneapolis Automobile Club that ended on Friday night last, 29th ult. Of this unlucky number of cars in at the finish only one had a perfect score. The strenuous contest resulted in a notable victory for O. E. Martin, who drove a Thomas-Detroit through 249 miles of mud and mire with the least penalization. When the run finished the Thomas-Detroit was the only car that had a perfect score, but to make the test most conclusive of any that has yet been held, the technical committee got to work, while the gasolene expert figurers figured which car had been the most economical. Both this and the condition of the car counted in the final award, and the Thomas-Detroit came through with the highest percentage of .929, while two Ford cars, driven respectively by George Dorr and A. A. Hanson, were second and third in the final placing. So far as economy was concerned the two Great Arrow cars carried away the honors. The car driven by Paul Hoffmann had the highest percentage as regards economy, with 1,000, and his teammate, Winchester, was given a percentage of .986 in the economy award. For winning Martin receives the Tribune trophy and a gold watch.

The Minneapolis endurance run was as strenuous as any that has been held, although the distance was only 249 miles. The first day's run to St. Cloud, 151 miles, was easy for most of the drivers, as only three had bad luck. Thomas Bromwell, Oldsmobile, went into a ditch on the trip to St. Cloud and withdrew after he found that he was so late at the St. Cloud control as to prevent him making a good showing. On the return trip from St. Cloud to Minneapolis, F. H. Switzer's Moon car had considerable trouble and was withdrawn as it

was so late getting in. The most serious accident happened to H. J. Clarke's Pope-Hartford. On the return trip from St. Cloud an unexpected skid sent the car over a small bridge and it landed bottom up in the water. The car finally was righted and reached Minneapolis but with a penalization of 246 points. It later was disqualified for having left the official course. The total penalizations for the first day were as follows:

E. Simpson, Rambler, road work, 25 points; W. C. Rice, Kisselkar, road work 44, seals 175, total 219; D. Sutton, Welch, road work 2; T. Bromwell, Oldsmobile, time penalty 95, road work 107, seals 50, total 1,252; F. H. Day, Oldsmobile, road work 25, seals 25, total 50; W. A. Fox, Cartercar, road work 27; John Fawkes, Overland, road work 6, seals 50, total 56; H. J. Clarke, Pope-Hartford, time pealty 246. This left ten of the original starters with perfect scores, while one car had not reported.

The second day proved the Waterloo, however. The original intention had been to run to Mankato and return but the roads were reported to be in such fearful condition that a change was made, with Northfield as the turning point and the finish in Minneapolis—a total of 98 miles for the day's run. From the moment the cars left. Minneapolis the roads were nothing but seas of mud, and an interminable series of ruts reached all the way to Northfield. The cars were continually up to their axles in the sticky black loam which prevailed in the greater part of the roads. Despite this fact the trip to Northfield was uneventful and most of the cars reached there without any great penalization. The trouble came on the return trip.

With the pounding given the mud by the seventeen cars on their out trip and the warm wind blowing and getting in its drying work, the going was much better for a few miles out of Northfield. Then, just as every thing began to look lovely, a terrific thunder shower opened its batteries and within fifteeen minutes the course was a worse mire than it even had been in the morning. Ruts that had been worn down to a hard and firm bottom were again flooded and softened; bad sections that had

been carefully studied by the drivers were inundated and thus lost to view; rushing torrents coursed from every hillside and all the little valleys between inclines of the road were changed to lakes of mud and slime.

And then the grief began. Not heartbreaking, home-destroying grief, such as results when a man's car goes completely to the bad and refuses to give a last, dying kick, but plenty of the brand which bears all the earmarks, yet falls short of, the real article. Tire chains began to slip more frequently than before, while the low and intermediate gears were worked overtime in a heroic effort to pull the cars through the sloughs of despond. In one particularly had place in the road where all the rivulets and streams converged to turn the course into what looked like an impassable slough, the Cartercar became mired. Luckily the Mason came along and pluckily pulled it out at the imminent danger of becoming stuck itself. The Cartercar had a bad axle however and was left in a barn over night. A few minutes later the Welch sank in the same spot. And then the Pope-Hartford got it, too.

To make a long story short, there were only three cars that got back to Minneapolis with a penalization under 50 points. These were the Thomas-Detroit and the two Fords. Martin was the only driver that did not lose a point on either day, and the superb way he handled his Thomas-Detroit was the occasion for general comment and praise. His was a brilliant victory in spite of the adverse circumstances and he has reason to be proud of the handsome trophy and the gold watch which were his portion. Equally meritorious were the performances of Gus Hanson and George Dorr, who drove the two Fords, the smallest cars in the test. Hanson had tire trouble which caused him to lose two points, while Dorr lost but 25 points on the two days' run. According to the findings of the technical committee in their final examination the Franklin, driven by H. H. Mich, was in the best mechanical condition, and it was assessed only one point, but as it had lost 52 in road penalties on the second day that gave it a total which put it in fourth

Dand Danaldian

SUMMARY OF THE MINNEAPOLIS ENDURANCE RUN.

					Koad Pe	naities.	1 ecn-	
Driver. Name	of Car.	-Eco	nomy	Total.	lst day.	2d day.		Ptcg.
O. E. MartinThomas-	Detroit	484	495	9 79	—0	0	50	.929
George DorrFord			465	941	0	25	12	.904
A. A. HansonFord			435	903	0	2	7	.901
H. H. Mich Franklin			480	952	0	52	1	.899
Paul HoffmanGreat A			500	1000	—0	97	2 0	.883
J. Winchester			495	9 86	0	53	50	.883
Fred Harn Mason			475	948	0	134	10	.804
F. H. Day Oldsmol			495	960	50	118	12	.780
J. H. PriorStoddard			425	902	0	86	40	. 7 76
B. E. FawkesOverland			420	855	—5 6	108	10	.711
D. Sutton			450	937	2	322	50	.565
A. E. Kelley Stoddard			355	827	0	203	83	.541
W. C. Rice Kissel F			120	596	215	1070	55	-340

E. Simpson, Rambler, withdrawn, disabled. W. A. Fóx, Cartercar, withdrawn, ditched. T. Bromwell, Oldsmobile, withdrawn, ditched. F. W. Switzer, Moon, withdrawn, disabled. Charles V. Cooney, Thomas-Detroit, disqualified for leaving official course. H. J. Clarke, Pope-Hartford, disqualified for leaving official course.

TO FIGHT FIRES AT LONG BEACH

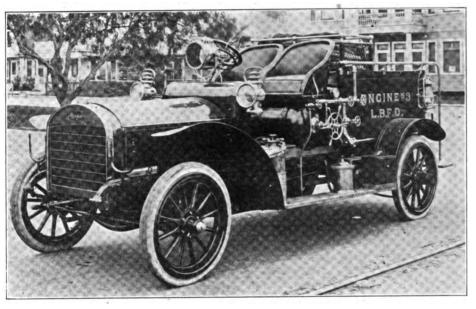
First Automobile Apparatus in Far West Carries Chemical Outfit and Full Complement of Men.

The first automobile fire fighter ever seen in the far West has lately been installed at Long Beach, Cal. The machine is a Rambler, designed by F. S. Craig, chairman of the Board of Public Works at Long Beach, and built by Thomas B. Jeffery & Co. at their Kenosha factory.

Many tests to determine the relative merits of horse-drawn and gasoline driven from specialists, and building to suit the individual tastes of prospective owners. His first production in this line is termed a combination vehicle, not from any specific property which it possesses, but because of its very catholic origin. It is propelled by a 17 horsepower motor of well known make, is of generally standard construction, and is mounted on 114-inch wheel base. Outwardly it bears a close resemblance to the typical American roadster runabout.

Pierce Luxuriousness in Book Form.

Of all de luxe productions of the printer's art as applied to automobile literature, none ever has been more impressively magnificent than "The Factory Behind the Great



FIRST AUTOMOBILE FIRE FIGHTER IN THE FAR WEST

fire apparatus were made before this car was selected.

The motor is of the four-cylinder vertical type, the wheel base is 120 inches, the regular 1908 Rambler tire equipment is used and the car is guaranteed to operate under a weight of 3,000 pounds at a speed of at least 35 miles an hour. Side chain drive is used, with three forward speeds and reverse. The chemical tanks are double 80-gallon receptacles and are placed under the forward seats. The rear portion of the car is used to carry 250 feet of hose. The coil of chemical hose is just back of the seats. Hand fire extinguishers are carried on the running board. Five men can be carried.

A special starting device has been provided in the form of an inclined platform so that when the alarm is received the platform is tipped and the car glides out of the station without one second's delay.

Combination Assemblage in Custom Car.

In the latest project of a Warwickshire maker the logical outcome of extended parts production is manifest. He proposes manufacturing cars to order and to specification, purchasing all the components

Arrow Car," which just has been issued by the George N. Pierce Co., Buffalo, N. Y. Primarily it is a description of the mammoth new plant, in which the Great Arrow is built. But it is much more than that. In describing the factory, the author, who is John Ford, also has described, by the aid of strong words, and glorious and well chosen pictures, the making of the car itself. The book is quarto in shape, and bound in boards with a quiet but impressive cover design in greens and gold. Heavy surfaced paper is used, and the 70-odd pages of contents are filled with vivid word sketches and illustrations, set off in neat gold decorations embodying the sign of the arrow. Every department of the plant is taken up in sufficient detail to show the nature and importance of its use. The pictures show not simply the place where the work is done, but also parts of cars almost beyond number in actual process of construction. It is a high grade work, thoroughly characteristic of the Pierce people and in keeping with their product.

"The A B C of Electricity." Price 50. The Motor World Co., 154 Nassau Street, New York City.

MOTOR VEHICLES IN MAIL SERVICE

France Adopts New Postal System Developed Through Recent Experiments—

Its Economical Features.

Experiments looking toward the permanent use of the motor vehicle in the handling of the mails which, as applied in Paris, resulted in the adoption of a number of gasolene machines, of which no less than 120 are expected to be in service shortly, as told in the Motor World recently, have also been carried out in other portions of France with equally successful results. A series of trials made at Lorris in the department of Loiret, not long since, were particularly successful, and have opened up possibilities in this conection which are entrely novel.

The system which has been worked out in this connection is one of distribution in the way of feeding rural or semi-rural routes which otherwise must have been poorly served because of the long distances the carriers were forced to travel in reaching the main distributing points. By localizing the work of the carriers in this way, and shortening up their routes, they were enabled to increase the number of deliveries per day, while the mails collected were invariably delivered at the center of distribution in sufficient time to meet the schedules over the trunk lines.

The test during which this plan was tried extended over a period of two weeks, from January 15th to 30th, last, and employed a closed touring car furnished by the De Dion Co. Of the conditions undertaken and the results secured, the Scientific American says:

The post office at Lorris has eleven postmen, who are obliged to deliver mail in the city and in the surrounding suburbs of Moutereau, Cour-Marigny, Chailly, Coudray, Chataenay, Noyers, Vielled-Maisons, and Grignon. Despite the fact that the postmen are supplied with bicycles, it is nevertheless difficult to give good service on account of the large amount of mail. As a consequence, most of the suburbs have only one delivery a day.

"The experiment was carried out in the following manner: Five of the postmen were located permanently in the suburbs of Moutereau, Cour-Marigny, Chailly, Coudray, and Chataenay. Each morning the automobile started at 7 o'clock and made the rounds of these suburbs, delivering to the various postmen their mail pouches. Upon receipt of the pouches, the postmen immediately began delivering the mail. The automobile also collected from the postmen the pouches filled at Lorris at 9.15 a. m., in time for the mail leaving at that hour for Montargis, a place some 13 miles distant, to which the mail is conveyed by a horse-drawn omnibus.

"The experiment proved that by using

an automobile in this manner, the services of several postmen could be dispensed with. and that two deliveries and collections per day could be readily made, the first delivery being a half hour earlier than before. This method of delivering mail makes it necessary for the postman to be on hand when the automobile arrives, and thus puts a check upon him. During the 15 days of the test, although the train was always late in arriving at Lorris, the automobile finished every trip on time."

America Importing Fewer Foreign Cars.

Foreign cars imported to the United States during the month of April last exhibited a falling off of some 33 per cent., both in number and value over the corresponding returns for last year. The 58 cars imported this year were valued at \$148,603 as compared with \$277,052, the value of the 89 cars brought over during April, 1907. France, though the largest contributor, with its 30 cars, in comparison to 70 imported last year, also was the greatest loser of American trade. Italy, on the contrary, doubled its exportation to America, sending just 20 cars. Germany gained by one car, sending 4 in all, while England's contribution consisted of 3 cars, as against 4 one year ago. The total valuation of components imported was \$38,365, in contradistinction to the \$66,957 aggregate of 1907.

B. & S. Apply the A. L. A. M. Standard.

The Billings & Spencer Co., Hartford, Conn., has been quick to turn to advantage the A. L. A. M. standard for rod and yoke ends. Their products conforming to the standard already are available. They are drop forged, of course, and are made strictly in accordance with the A. L. A. M. specifications both as to quality of material and design. Their design is such as will permit of the greatest possible radius of action, maximum strength with minimum weight. They are furnished either in blanks, milled or assembled. The shanks are swelled at the ends to facilitate hand welding. The adjustable yoke ends also are to be had in blanks or milled and threaded...

Temporary Cleaning of the Muffler.

Although it is necessary to remove the muffler from the car and take it entirely apart in order to clean it thoroughly, it is possible to effect a very satisfactory temporary clearing of its choked passages by tapping it lightly all over with a hammer. The result is that a considerable portion of the sooty accumulation within it is knocked off the walls and is blown out through the exhaust pipe.

The Hartford (Conn.) Automobile Dealers' Association are taking steps toward standardizing the price of supplies. Amongst other articles which are to be sold at a uniform rate is gasolene, for which it is proposed to fix a price of 20 cents a gallon for tourists.

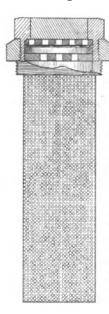
SAFETY DEVICE WINS GOLD MEDAL

Anti-Explosion Attachment for the Gasolene Tank-Sensational Experiments

in a Convincing Demonstration.

For being the "most meritorious invention for safeguarding motor vehicles," a gold medal last week was awarded by the American Museum of Safety Devices and Industrial Hygiene to the invention of William H. McNutt, for a device designed to prevent the explosion of gasolene and one which holds great interest for automo-

As shown in the illustration, the device, which is a combined cap and filler tube, consists of nothing more or less than a screen



made of perforated. brass, which is to be inserted in the filling hole of the tank. The cap varies according to the type of tank on which it is placed; if the tank is designed for gravity feed, a cap is used, the construction of which is very like an automatic intake valve, which permits the ingress of air and prevents an egress of vapor.

For pressure tanks

the valve principle is eliminated and the cap is solid. A feature of the caps, which is indispensible to the carrying out of the provisions for safety, is a fusible core, which as it is the weakest point in the tank, will blow out under an abnormal pressure; such a pressure as may be developed by the generation of gas due to the tank becoming over-heated. Each cap contains a perforated screen, and even when the gas from the tank is being emitted, a lighted match may be applied to the opening without causing either an explosion, or the ignition of the contents of the tank.

In a demonstration of the device made for a Motor World man, a metal covered table about five feet by four, was used. On the table were a half dozen cans of various sizes, each fitted with the perforated tube. The cans contained different quantities of gasolene, some were full, some half full, others had but little of the liquid, and one was empty, save for the few drops which may have remained from a previous demonstration. Gasolene was freely sprinkled over the table and a lighted match applied to it. The cans stood in the midst of the flames, uncorked. One cargenich contained perhaps a half pint of the fluid, was tipped over; the gasolene ignited as it flowed out of the filler hole of the can, but no explosion occurred.

A can that was half filled was picked up and a portion of its contents poured into another can; the stream of gasolene ignited as it went from the one receptacle to another, but the flame stopped at the spout of the can from which the gasolene was being poured, and at the filler hole of the other. The gasolene entered the latter, but the flame could not pass through the perforated tube

The demonstration was absolutely convincing. When once a can is equipped with the device there is nothing to fear from even the act of the servant: who attempts to facilitate the morning fire by pouring oil from the kerosene can. The filler tube and cap are made in various sizes, and readily can be applied to any receptacle designed to contain liquids. In the demonstration small "priming cans" equipped with the device were occasionally used.

While the invention only recently has been placed on the market, it was patented in July of last year. Its suitability to the purpose is evidenced not simply by the fact of the award of the medal, but by the fact, that it was recommended by the board of fire underwriters of New York after a series of exhaustive tests made more than a year ago. The whole value of the invention may be summed up by stating that neither heat or fire can cause an explosion of gasolene contained in a tank or receptacle fitted with this device, which is manufactured by the Non-Explosive Safety Naphtha Container Co., of New York.

Another of McNutt's inventions, which this company is making, is a device to be attached to or incorporated in the gasolene pipe between the tank and carburetter. In case of fire or intense heat attacking the motor, the flow of gasolene is automatically shut off by the breaking of a fuse wire which controls the action of a valve.

Tar Macadam to Make Roads Dustless.

Methods of allaying dust on the highway multiply to a bewildering extent, although the practical results of the thoroughly successful system remain to be evidenced to the casual user of the road. One of the most recent systems to be devised has lately been put to practical test in London before a committee of eminent engineers and governmental representatives, and is thought to be remarkably promising. It is a tar macadam process, in which the usual tar spraying is supplemented by the distribution of a surface layer of granite chips, which is subsequently rolled into the surface. A tar macadam road made in this way is said to cost from 85 to 97 cents a square yard as against 60 cents, the local cost per square yard of ordinary macadam. The surface so produced, however, is fine and smooth, and perfectly dustless.

OFFERS PRIZES FOR OUTLAWRY

A. C. A. Espouses Anti-American Cause and Outlines Its Spite Program-Grasping Georgians Execute a Flip-Flop.

Having started on a career of mischief making and having had its status as a purely local organization very formally and very explicitly and truthfully defined by the American Automobile Association, the aggrieved Automobile Club of America, of New York, felt called on to show its forcign correspondents, who had been "inspired" to protest against the rules for the Vanderbilt cup race, that it is possessed not only of not only the disposition, but of a few dollars, which it is willing to disburse in their interests.

The "call" was met at a special meeting of the board of governors of the club on Thursday last. Among those present were President Gary, head of the steel trust, whose interest in and familiarity with sport was so great that probably he knows less about the Vanderbilt and other rules than he knows about the price of asafoetida; Winthrop E. Scarritt, the Yankee Doodle oratorical fife and drum corps of the Orange mountains, who very properly left his Star Spangled Banner music at home, and "Bobbie" Morrell, the most convenient friend the press agents ever had, and who never stands on the shady side of any street when the sunlight of publicity is streaming. Morrell removed the bandages from his brow before entering the meeting. Dave Hennen Morris, who ought to know better than to mix with a sorehead movement, also was present. The club's chief garageman and secretary, who are carried on the club's payroll, likewise were in evidence in order to prove themselves worthy of their hire. Of course, the details of the meeting are not public property, but it was resolved to stand shoulder to shoulder with the foreign clubs which passed racing rules which bar the product of a number of American manufacturers, and to create as much of a disturbance as possible. It was decided that the surest means of attaining these ends was to defy the American Automobile Association and the National Association of Automobile Manufacturers which had agreed that three big national events each year were sufficient for all purposes. The A. A. A. having also ruled that any person engaging in an unsanctioned contest will be disqualified, the A. C. A. elected to promote four unsanctionable contests and thus raise a large crop of outlaws, and get as many people as possible into trouble. The club announced these decisions in the following resolutions:

Resolved, That the Automobile Club of America hold in the fall of 1908 a road race under the rules of the International Asso-ciation of Recognized Automobile Clubs,

as adopted at Ostend, July 14, 1907, and that the contest committee of the club be empowered to organize and carry out such a race.

Resolved, That the Automobile Club of America have a gold cup, to be known as "The Grand Prize of the Automobile Club of America," to be competed for annually in a road race to be conducted under the auspices of the Automobile Club of America under the rules adopted each year by the International Association of Recognized Automobile Clubs. The contest committee is hereby directed to have such a cup specially designed, of a character and value representative of the international importance of this event.

Resolver, That the Automobile Club of America organize and conduct each year the

following events:
First—The international road "The Grand Prize of the Automobile Club of America" under the rules of the International Association of Recognized Automobile Clubs as may be adopted each year.

Second-An international stock car race for the Briarcliff trophy.

Third-A long distance touring car con-

Fourth-A hill climbing contest.

Another meeting of the aforementioned people was held this week and all that emanated from the meeting rooms were exultant chuckles over the cablegrams that were read from the trade-controlled Automobile Club of France, besides the German club, and two other clubs which have never had cars in the Vanderbilt cup race, namely, the Royal Automobile Club of Great Britain and Ireland and the Automobile Club of Belgique. The Automobile Club de France, for which the Automobile Club of America acts as agent in this country. stated that it had held a meeting and had decided to recognize as official only the socalled grand prize race to be run by the New York club and to disqualify all French cars taking part in the Vanderbilt cup race, as well as to recognize the Automobile Club of America as its official representative. The English club congratulated the New York club on organizing a race and the German club indorsed the race besides stating that it would enjoin the German manufacturers to not participate in the Vanderbilt cup race. The Belgium club stated that it will maintain and respect the rules adopted at the conference at Ostend, in 1907. The Automobile Club of Afghanistan has not yet been heard from.

A cablegram from a Frenchman named Hogan, who apparently cannot read the English language correctly, also was received. It stated that the A. A. A. had made overtures to the French club. "overtures" were the resolutions adopted by the A. A. A. informing the foreign bodies that it was the ruling organization in America and that communications addressed to it would receive courteous consideration.

Later, advices from Savannah, Ga., state that the Savannah Automobile Club, which sought the Vanderbilt cup race and didn't get it, has executed a flip-flop and will join with the A. C. A. in promoting the "Grand prize race race" for outlaws.

FOR THE VANDERBILT CUP RACE

Date Fixed and Long Island Course Selected-Eliminating Trials will be Held, if Necessary.

The Vanderbilt cup race will occur on October 24th next, over a course on Long Island, which will include a portion of the motor parkway, work on which will be commenced on Saturday next, when 1,500 men will undertake its construction.

Announcement of these facts preceded by a day or two the issuance of the entry blank which gives other details.

Not more than ten cars will represent any one country and not more than three of any one manufacture. In the event of there being more than ten entries from a foreign country, the club representing such country will select the ten cars to compete. The club failing to make such selection before August 15th, 1908, the selection shall be made by the Vanderbilt cup commission

In event of there being more than ten entries from the United States, the racing board of the American Automobile Association will decide by a trial race of at least 250 miles to be held at least two weeks before the cup race, which of the entries shall compete in the cup race. This trial race will be limited to the first 30 cars entered to represent the United States, and the first 10 cars to finish shall be selected.

The distance of the cup race itself will be not less than 250 miles and not more than 300. Entries will close September 1st. Until that date the entry fee will be \$1,000; thereafter, it will be doubled.

Despite the peanut politics being played by the Automobile Club of America, socalled, in an effort to injure the race and the A. A., Chairman Jefferson De Mont Thompson has no fear of a dearth of foreign entries. He states that already he has been promised several foreign entries, while American manufacturers are building cars for the race, one entry of a six-cylinder car having been made this week. If the rules adopted at the Ostend conference and espoused by the A. C. A. were to govern the Vanderbilt race, six-cylinder cars would have been barred, even though they met the cylinder capacity requirement.

Another thing that happened this week which shows how small a foundation the Automobile Club of America stands upon to conduct a race of any sort is the authorized statement of Thomas Henderson, president of the National Association of Automobile Manufacturers, representing all the manufacturers in America. It is to the effect that the American manufacturers will stand by the American Automobile Association, which they recognize as the governing body, and will sustain and abide by its rulings.



RHODE ISLAND GRADES THE FEES

New Automobile Law in Effect on First of June-Its Enforcement in Hands of Board of Public Roads.

After many vicissitudes in the Rhode Island Assembly the several automobile measures that body has had under consideration during the present session have been crystalized in a new law which was passed by both branches on the 26th ult., and soon after was signed by the Governor. The law went into effect on Monday, 1st inst.

The groundwork of the new law will readily be recognized as being based on the Connecticut statute. of its noteworthy provisions transfers from the Secretary of State to the Board of Public Roads all the business of registration of motor vehicles and licensing of operators. It establishes a graduated scale of fees for automobile licenses, based on horsepower rating, and ranging from \$5 up to \$25, with a special fee for dealers fixed at \$50. Automobile trucks are not included in this scale, the fee required for their registration being only 50 cents. Motorcycles will be registered for the same fee. Operator's license fees are fixed at 50 cents for motorcycles and \$1 for other motor vehi-Visiting motorists are allowed 20 days in which to register. Speed is limited to 15 miles per hour in compact sections and 25 miles elsewhere. No racing on public roads is permissible under the law. Tire chains may be used on slippery roads. Cities and towns are prohibited from enacting or enforcing ordinances setting speed limits, or otherwise regulating motor vehicles except that they may exclude them from certain roads in their respective municipalities, other than State roads or main highways. Such closed roads must be designated by signs.

Exceeding the speed limit, operating a vehicle when intoxicated, or racing on the road on a bet or wager, or to make a record may be punished by a fine of not more than \$200, or imprisonment for not more than 30 days, or both, for a first offense; for a second offense the penalty is a fine of not more than \$500, or imprisonment for not more than 60 days, or both; for a third offense, within any one calendar year, the penalty is imprisonment for not more than 90 days, and disqualification for a term of two years. For making false statements on applying for registration, or for operating without a license the penalty is a fine of not more than \$500, or imprisonment for not more than 60 days, or both. Violation of any of the other provisions of the law entails a penalty of a fine not exceeding \$100, or imprisonment for not more than 30 days. or both. The full text of the new law follows:

Section 1. Definitions. The words and

phrases used in this act shall, for the purposes of this act, unless the same be contrary to or inconsistent with the context, be construed as follows: (1) "Motor vehicle" shall include all vehicles propelled by mechanical power, except road rollers, street sprinklers, fire engines and apparatus, police patrol wagons, ambulances, and such vehicles as run only upon rails or tracks;
(2) "motorcycle" shall include only those motor vehicles having pedals and saddle, with driver sitting astride; (3) "registration" has reference to vehicle; registration of a motor vehicle by the owner or person in control thereof does not give such person the right to operate the machine upon the public highways; (4) "license" has reference to the operator; each person who operates a motor vehicle must have an operator's license; (5) "public highways" shall include any highway, State road, public street, avenue. alley, park, parkway, drive-way or public place in any city, village or town; (6) "closely built up" shall mean (a) the territory of a city, village or town contiguous to a public highway which is at that point built up with structures devoted to business, (b) the territory of a city, village or town contiguous to a public highway not devoted to business, where for not less than one-quarter of a mile the dwelling houses on such highway average less than 100 feet apart, and also (c) the territory outside of a city or village contiguous to a public highway within a distance of one-half mile from any post office; provided. that for a distance of at least one-quarter of a mile within such limits the dwelling houses on such highway average less than 100 feet apart; and provided, further, that the city and town officers having charge of such highway shall have placed conspicuously thereon signs of sufficient size to be easily readable by a person using the highway, bearing the words, "slow down to 15 miles," and also an arrow pointing in the direction where the speed is to be reduced.

Sec. 2. Every owner of one or more motor vehicles shall file in the office of the State Board of Public Roads, on a blank furnished by said Board, a statement, under oath, of his name, residence and post office address, and a brief description of each motor vehicle owned or controlled by him, including the name of the maker, the number, if any, affixed by the maker, the character of the motor power and the amount of such motor power stated in figures of horsepower as advertised by the maker thereof, and such other information as shall be required by said Board. The said Board shall then register each such motor vehicle, assigning to it a distinguishing number or mark, and shall thereupon issue to the owner thereof a certificate of registration which shall contain the name, place of residence and post office address of the owner and the number or mark assigned to such motor vehicle, and such certificate shall at all times be carried upon such motor vehicle and shall be subject to examination upon demand by any proper officer. cates provided for in this section and in section 3 shall continue in force until one year from the date of issue, and upon the renewal of any such certificate said Board shall reassign the distinguishing number or mark contained therein.

Sec. 3. Every manufacturer of or dealer in motor vehicles may, instead of register-ing each motor vehicle owned or controlled by him, make application under oath to said Board for a general distinguishing number or mark, and said Board may, if as to the facts stated in said application. issue to the applicant a certificate of registration containing a name, place of residence and post office address of the applicant and the general distinguishing number

or mark assigned to him; and all motor vehicles owned or controlled by such manufacturer or dealer shall, until sold or let for hire, or loaned for a period of more than successive days, be regarded as registered under, and having assigned to them, such general distinguishing number or mark. Manufacturers or dealers shall not be required to carry such certificates upon the vehicles registered under the provisions of this section, but every person operating a motor vehicle registered under the provisions of this section shall display on such vehicle, in such manner as said Board may prescribe, the operator's license number assigned to such person.
Sec. 4. Every motor vehicle, except mo-

torcycles, shall, at all times while being used or operated upon the public highways of this State, have displayed in a conspicuous place and manner a plate or marker entirely unobscured and securely fastened upon both the front and the rear of such motor vehicle, the plate or marker on the rear thereof to be fastened so as not to swing. Said plates or markers shall be obswing. Said plates or markers shall be obtained from the State Board of Public Roads, as hereinafter provided, and shall bear the initial letters of this State and the number and mark assigned to such motor vehicle, the figures theron to be not less than four inches high and each stroke thereof to be not less than one-half inch wide; and in case of plates or markers not in use on motor vehicles on the date that this act takes effect, the letters and figures thereon to be not less than four inches high and each stroke thereof to be not less than onehalf inch wide.

Sec. 5. Every motorcycle shall, at all times, while being used or operated upon the public highways of this State, have dis-played thereon the initial letters of this State and number or mark assigned to such motorcycle, such letters and figures to be at least one inch high, and either painted on such motorcycle or displayed on a plate or marker securely fastened thereto, and motorcycle shall be operated with its muffler open.

Sec. 6. The State Board of Public Roads shall keep a record of all statements filed with said Board and of all certificates issued by said Board, which shall be open to public inspection; and said Board shall furnish, from time to time, at cost price, to any person having a motor vehicle registered under the provisions of this act. as many plates or markers as may be required by such person for display upon such motor vehicle. Upon the transfer of ownership of any motor vehicle its certificate of registration shall expire, and said Board, at its discretion, may reassign the distinguishing mark or number described in such certificate. In the event that any certificate or license issued by said Board under the provisions of this act shall be lost or destroyed, said Board shall issue to the person whose certificate or license has been so lost or destroyed, a duplicate thereof. In the event that said Board is unable to immediately furnish any plate or marker provided for by this act to any person entitled thereto. said Board may issue a certificate to such person stating that such marker has been ordered and giving the number thereof, and such person may thereafter use a temporary plate or marker, similar in form to the plate marker provided for by this act, until said plate or marker has been so furnished.

Sec. 7. No person shall operate a motor vehicle upon the public highways of this State until he shall have first obtained a license for that purpose, but nothing herein contained shall prevent the operating of a motor vehicle by an unlicensed person other than a person whose application has been refused or whose license has been sus-

pended or revoked, if accompanied by a licensed operator, which licensed operator shall also be personally liable for any violation of the provisions of section 11, 12 or 13 of this act. Licenses for operating mo-tor vehicles shall be issued by the State Board of Public Roads, but no license shall be issued to any person under the age of 16 years. Any applicant for a license to be issued to any person under the age of 16 years. Any applicant for a license to operate a motor vehicle upon the public highways shall be required by said Board to show such knowledge of the mechanism of motor vehicles, the rules of the road and the motor vehicle law, as will, in the opinion of said Board, render said applicant a proper and safe person to operate said vehicle upon the public highway. The State Board of Public Roads may, at its discre-tion, refuse to grant a license for operating a motor vehicle upon the public highways to any applicant whom, for any reason, it considers an improper person. Applications for licenses shall be made under oath upon blanks furnished by said Board, and said application blanks and said licenses shall be in such form and contain such provisions, not inconsistent with this act, as said Board may determine. A number shall be assigned to each license, and a proper record of all applications for licenses and of all licenses issued shall be kept by said Board at its office, and shall be open to public in-spection. Each license shall state the name, place of residence and post office address of the licensee, and the number assigned to him. Said license shall continue in force until one year from the date of issue, unless suspended or revoked for cause, and shall at all times be carried by the licensee when he is operating a motor vehicle upon the high-ways of this State, and shall be subject to examination upon demand by any proper officer; and said licenses shall have indorsed thereon in the proper handwriting of the licensee the name of said licensee and when requested by a proper officer, in the discharge of his duties under this act, said licensee shall write his name in the presence of said officer, to the end that the identity of said licensee may be determined

Sec. 8. The following fees shall be paid to the State Board of Public Roads for the certificates and licenses issued by it in accordance with the provisions of this act: Five (5) dollars for each certificate of registration of a motor vehicle, other than a motorcycle or automobile truck of 20 horsepower or less; ten (10) dollars for each motor vehicle over 20 horsepower and not more than 30 horsepower; fifteen (15) dollars for each motor vehicle of more than 40 horsepower; twenty-five (25) dollars for each motor vehicle of more than 40 horsepower; fifty (50) cents for each certificate of registration of a motorcycle or automobile truck or duplicate thereof; fifty (50) dollars for each dealer's or manufacturer's certificate; one dollar for each original license or duplicate thereof to operate a motor vehicle other than a motorcycle; fifty cents for each original license or duplicate thereof

of to operate a motorcycle.
Sec. 9. The State Board of Public Roads may after due hearing upon not less than three days notice in writing, suspend or revoke the license issued to any person under section 7 of this act, for any cause which it may deem sufficient; but every application shall be refused by said Board, and every licensee whose license shall be suspended or revoked by said Board, may appeal to the Superior Court from such decision, refusal or revocation, which court may affirm or overrule the decision of said Board. Every District Court in this State shall in every case in which a person is convicted of a violation of any of the provisions of section 11, 12, or 13 of this act

within 10 days after such conviction therein, transmit notice thereof to the State Board of Public Roads. Said courts may furnish to said Board the details of all flagrant cases which may be heard before them, and they may make such recommendations to said Board as to the suspension or revocation of the licenses of the parties defendant in such cases as they may deem proper. Said Board shall keep such data in its office, which shall be open to public inspection. Whenever any person licensed to operate a motor vehicle upon the public highways of the State shall have been convicted of any violation of section 11, 12 or 13 of this act, said Board may revoke the license of such person, and require the license of such person, and require the license of such person, and require a return of the same. No person shall, for the period of three months from the date of the revocation of his license, be capable of receiving a new license, nor thereafter except in the discretion of said Board.

Sec. 10. Any non-resident of this State who shall have complied with the laws of the State or territory of the United States in which he resides, requiring the registration of owners of motor vehicles, or of motorcycles, or of both, and the display of identification numbers on such vehicles, and who shall cause the identification numbers of such State or territory, in accordance with the laws thereof, and none other, together with the initial letter or letters of such State or territory, to be displayed on his motor vehicle while used or operated upon the public highways of this State, may bring his motor vehicle into this State for use on its highways without complying with the provisions of the foregoing sections of this act; provided, however, that if said non-resident shall use his motor vehicle on the highways of this State more than twenty (20) days in any one calendar year he shall then be subject to and shall comply with said provisions, and if he shall be convicted of violating, on any of said 20 days, any provisions of section 11, 12 or 13 of this act, he shall immediately be subject to and required to comply with all the provisions of this act relating to the registration of motor vehicles and the li-Sec. 11. No person shall operate or cause

sec. 11. No person shall operate or cause to be operated a motor vehicle on the public highways of this State recklessly or at a rate of speed greater than is reasonable and proper, having regard to the width, traffic and use of the highway, or so as to endanger property or the life or limb of any person, or in any event on any public highway, where the territory contiguous thereto is closely built up, at a rate of speed greater than 15 miles per hour. or elsewhere at a rate of speed greater than 30 miles per hour, subject, however, to all other provisions of this section, and of this act relative to the operation of such vehicles.

Sec. 12. Upon approaching any person standing or walking in the traveled portion of any public highway, or a horse or any other draft animal being led, ridden or driven therein, or a crossing of intersecting public highways, or a bridge, or a sharp turn, or a curve, or a steep descent, and also in passing such person or such horse or other draft animal, and in traversing such crossing, bridge, turn, curve or descent, the person operating a motor vehicle shall have the same under control and shall reduce its speed to a reasonable and proper rate. If such horse or other draft animal being so led, ridden or driven shall appear to be frightened, or if the person in charge thereof shall signal so to do, the person operating such motor vehicle shall bring the same and the motor or other power propelling the same immediately to a stop, and

if traveling in the opposite direction, shall remain stationary so long as may be reasonable to allow such horse or animal to pass, or if traveling in the same direction, shall use reasonable caution in thereafter passing such horse or other animal. Upon approaching a crossing or intersecting high-ways, a bridge, sharp turn, curve, or a steep descent, the person operating a motor vehicle shall slow down and give a timely signal with his bell, horn or other device for signaling. Whenever two vehicles meet on a public highway, the operator of each vehicle shall reasonably keep to the right so as to pass without interference. one vehicle overtakes another, the one in the rear shall give timely signal as aforesaid, and shall pass on the left, and the operator of the one in front shall seathe operator of the one in front shall seasonably bear to the right so as to allow free passage on the left. The driver of any motor vehicle on any highway, approaching an intersecting highway, shall slow down and keep to the right of the intersection of the centers of both highways, when turning to the right, and pass to the right of the intersection of the centers of said highways before turning to the left. Every driver of a motor vehicle, after knowingly causing an accident by collision or otherwise, or knowingly injuring any person, horse or vehicle, shall forthwith bring his motor vehicle to a full stop, return to the scene of the accident and give to any proper person, demanding the same, the number of his driver's license, the registration number of the motor vehicle, and the names and residences of each and every male occupant of said motor vehicle. Sec. 13. No person shall operate a motor

Sec. 13. No person shall operate a motor vehicle on the public highways of this State when intoxicated, or in a race, or on a bet or wager, or for the purpose of making a record.

ing a record.

Sec. 14. No city or town shall have power to make any ordinance, by-law or resolu-tion respecting the speed of motor vehicles, and no ordinance, by-law or resolution heretofore or hereafter made by any city or town in respect to motor vehicles shall have any force or effect: Provided, however, that city and town councils of the several cities and towns may exclude motor vehicles from certain roads in their respective towns, and shall designate such roads by public signs Provided, that such roads excluded shall not include State roads or main highways leading from town to town, and provided further, that powers given to any city or town to regulate shows, processions, assemblages or parades in streets and public places, and to regulate the use of public parks, and all ordinances, by-laws and regulations which may have been or which may be enacted in pursuance of said powers shall remain and be in full force and effect.

Sec. 15. No motor vehicle, while in use on the public highways of this State, shall have displayed upon either the front or the rear of such vehicle more than two registration plates or markers, nor shall any person display, or permit to be displayed upon his motor vehicle the registration number belonging to another vehicle or person, or a fictitious number, plate or marker.

Sec. 16. Every motor vehicle, while in use on the public highways of this State, shall be provided with adequate brakes, with a muffler and with a suitable bell, horn or other device for signaling, and shall, during the period from one hour after sunset to one hour before sunrise, display one or more white lights on the forward part of such vehicle, so placed as to be seen from the front, and shall also display, on the rear of such vehicle, a lamp so placed that it shall show a red light from the rear and a white light at the side, and so arranged as

to illuminate the rear number or marker, all of which said lights shall be of sufficient illuminating power as shall be prescribed by the State Board of Public Roads.

Every motor vehicle shall be provided with a lock, key or other device to prevent said vehicle from being set in motion, and no person shall allow any such vehicle operated by him to stand or remain unattended in any street, avenue, road, alley, highway, park, parkway or other public public place without first locking or making fast the vehicle as above provided. No motor vehicle tire shall be fitted with a chain when used upon gravel, macadam or other made roads, except upon natural dirt, asplialt, cobble, Belgium block or vitrified brick pavements: Provided, however, that tires may be fitted with a chain when reasonably necessary for safety in case of slippery roads.

Sec. 17. No person shall interfere or tamper with a motor vehicle without the per-

mission of the owner.

Sec. 18. Any person violating any provision of sections 11 or 13 of this act shall for the first offense be fined not more than \$200 or imprisoned not more than 30 days, or both; and shall for the second offense be fined not more than \$500 or imprisoned not more than 60 days, or both; and shall for the third offense within any one calendar year be imprisoned for not more than 90 days, and shall thereby forfeit his li-cense and be thereby disqualified from obtaining any such license within two years thereafter. Any person making false affida-vit under the provisions of sections 2, 3 and 7 of this act, or who shall register or cause to be registered any motor vehicle in the name of any person other than the owner thereof, shall be fined not more than \$500 or imprisoned not more than 60 days, or

by both such fine and imprisonment. Any person violating any other provision of this act shall be fined not more than \$100 or imprisoned not more than 30 days, or both, for every such violation, and any court before whom a final conviction shall be had,

under the provisions of sections 11, 12 or 13, of this act, shall indorse upon the license of the person convicted the date and particulars of such conviction.

Sec. 19. All money collected for registration, and license fees and fines under the provisions of this act shall be turned over to the general treasurer, to be used for the repair and maintenance of State roads and highways in this State under the roads and highways in this State, under the direction of the State Board of Public

Sec. 20. Sec. 20. Any person arrested for violating any of the provisions of this act may tender as bail a motor vehicle of which he is the owner, and if his interest in such vehicle is of sufficient value, it may be accepted as security for his appearance, in lieu of

Sec. 21. All certificates of registration of motor vehicles issued under the provisions of chapter 1157 of the Public Laws, passed at the January session, 1904, shall continue in force for 90 days after this act shall go into effect, but every owner of a motor vehicle so registered shall register such motor vehicle in accordance- with the pro visions of this act before the expiration of

said 90 days.
Sec. 22. The State Board of Public Roads may assign to any motor vehicle, registered under the provisions of this act, the same registration number and the same plates or markers heretofore assigned to it or used under the authority of chapter 1157 of the Public Laws, passed at the January

session, 1904.

Sec. 23. The Secretary of State is here-by authorized and directed to turn over to the State Board of Public Roads all records of the certificates of registration issued by him in accordance with the provisions of chapter 1157 of the public laws, passed at the January session, 1904, which shall be in his custody at the time this act takes effect.

Sec. 24. The State Board of Public Roads

may employ such asistance and incur such expense as may be necessary to carry out the provisions of this act, and the sum of two thousand dollars (\$2,000), or so much thereof as may be necessary, is hereby appropriated, out of any money in the treaspropriated, out of any money in the treasury not otherwise appropriated, to defray the expenses of such Board in carrying out the provisions of this act; and the State Auditor is hereby authorized to draw his order upon the General Treasurer for the payment of the said sum, upon the receipt by him of properly authenticated vouchers. Sec. 25. Chapter 1157 of the Public Laws.

passed at the January session, 1904, and all acts and parts of acts inconsistent herewith, are hereby repealed, and this act shall take effect from and after the first day of

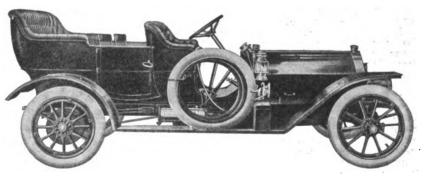
June, 1908.

Wildwood Club Holds Summer Election.

The Motor Club of Wildwood, which flourishes at the New Jersey coast resort of that name in the summer season, has elected to serve during the current summer the following officers: President, Philip P. Baker; vice-president, Evans G. Slaughter; treasurer, J. Thompson Baker; secretary, V. G. Reynolds; racing secretary, H. L. Hamersley; trustees, Thomas S. Goslin and John Bright.

HE PREMIER

The car which can be depended upon to do things and do them well



It is probable that no fully equipped touring car was ever called upon to attempt an undertaking as trying as the work of laying out the 1908 Glidden Tour.

The unusual difficulties were due to the condition of the roads, so thoroughly water soaked as to render them practically bottomless. The Premier met every requirement successfully and without delay to the party or car.

If considering the purchase of a car the performance of this regular stock Premier means something.

• Our Glidden Tour booklet and catalogue will be sent you upon request.

PREMIER MOTOR MANUFACTURING COMPANY, Indianapolis, Indiana

Members American Motor Car Manufacturers' Association.

HORSEMEN IN HORSELESS VEHICLES

Types of Famed Equestrians, from Plain, Steppe and Sierra, as They Appeared Grouped in Automobiles.

When the circus comes to town even little old New York sits up and takes notice. And when Buffalo Bill's Wild West and Congress of Rough Riders of the World appears, the town sits up again and takes more notice, for while the Wild West really isn't the circus, it looks a good deal like it and causes much the same sort of thrills. When Buffalo William arrived here the last time the press agent got busy and the accompanying photograph is the result.

ceived the money which, he said, he turned over to his chief. The court, after hearing both stories, declared that Venable ought to have his money, but couldn't collect it from Blum, as the policeman had acted in an official capacity and properly had turned it over to his superior officer. The \$20 is supposed to be at the present time in the custody of the commissioner of motor vehicles.

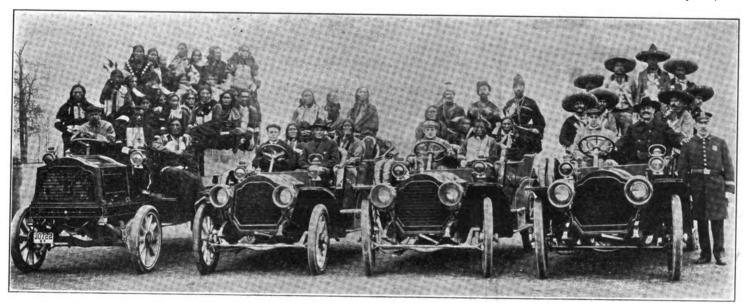
Owners Must Pay Two-Ply Tax.

When City Controller George T. Breunig, of Indianapolis, gets his plans for collecting automobile taxes fully into operation, many owners in that city will have a two-ply demand to met. Breunig purposes not only the enforcement of the ordinance requiring an annual license fee of \$3, but to compel owners to pay the 1907 fee which

COOLED CYLINDERS WITH COLD TEA

Odd Expedient of Lieut. Graetz During
Long African Journey—His Progress
Across the Dark Continent.

The attempt to reach Paris from New York, by automobile service, and by the indirect route via the American and Asiatic continents, have served to blot out of mind the efforts which a German army officer is putting forth to cross Africa by the same expeditious means. While the public has forgotten him, however, it appears that the ambitious Lieutenant Graetz has not been idle. When last heard from, he had fared to Fort Jameson in northeastern Rhodesia, some 100 miles west of Lake Nyassa, and a



REPRESENTATIVES OF HORSE LOVING RACES GROUPED IN HORSELESS VEHICLES

While there is nothing especially novel in the idea of photographing the peoples of different parts of the world in automobiles, this picture is of interest in that it depicts a group of three different peoples who are world famed as horsemen—Indians, Russian Cossacks and Mexicans.

Puzzling Disappearance of Cash Bail.

One of those queer experiences that sometimes come to motorists who fall into the clutches of the police was aired in the second District Court, Newark, on Friday, 22d ult. Frank P. Venable, of Paterson, told Judge Lintott that having been arrested in Bloomfield on a charge of exceeding the speed limit he was taken before Policeman John Blum, who was acting desk sergeant at the Bloomfield station. Putting up \$20 to assure his appearance in court the next day, he was permitted to go. When he made his appearance the next day the recorder was not on hand to try the case and since then, he said, he has received no notice to appear. For that reason he wanted his money back. Blum admitted having rethey refused to pay, pending the settlement of the question as to the validity of the ordinance.

Owners of automobiles insisted, until a recent decision by Judge Allen, of the Circuit Court, that the city's ordinance as it applies to automobiles was unconstitutional, as it was in conflict with the State law governing the licensing and control of motor vehicles. Judge Allen held, however, that it is not, as the city ordinance is a revenue measure, whereas the State law is purely a measure for police regulation. Automobile dealers, who brought the suit to test the ordinance, decided not to appeal the case from the Circuit Court, so the controller's office has ample authority for the severe measures which it is proposed to adopt to bring in the overdue fees for 1907 as well as those for 1908.

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

little north of its southern end. Up to that point he had covered about 1,500 miles, exclusive of detours required by exigencies of the country.

Starting from Dar-es-Salaam, the capital of German East Africa, he succeeded in making his way through Tabora to the southern end of Lake Tanganyka, whence he traced the road to Lake Nyassa, familiarized by Stevenson's "In Darkest Africa." The expedition has been 8 months on the trail, but was laid up in the Usagara Mountains, waiting for the arrival of a new cylinder from Europe, needed to replace one which had been cracked.

The book of his adventures is yet to be published, of course, but when issued, it is expected to contain a series of thrilling incidents, which the snow-ploughing exploit in North America can in no way equal. These will include a little of most everything from impromptu bridge building to running a motor with cold tea in the radiator across the Ugogo desert, where human thirst was wholly secondary to the demand of the parched cylinders for something cooling.

The Week's Patents.

883,146. Bearing for Supporting Radiators in Automobile Frames. Percy W. Noble, New York, N. Y., assignor to Charles A. Singer, Larchmont, N. Y., and Henry U. Palmer, Brooklyn, N. Y. Filed Nov. 23, 1907. Serial No. 403,493.

1. In combination, an automobile frame carrying a bearing box provided with a bearing seat, a radiator supporting saddle carrying a trunnion provided with a bearing surface, and a retaining bearing cone adapted to engage with said bearing box and the said surface of the trunnion.

883,167. Attachment for Motor Vehicles. Joseph H. Carpenter, Jr., and George J. F. Carpenter, Ossining, N. Y. Filed Jan. 9, 1904. Serial No. 188,297.

A device of the character described including a frame adjustably fastened to the rear frame of a vehicle comprising a sheet of canvas rigidly mounted on said frame, strengthening ribs intermediate of the side rods of said frame, said strengthening ribs being so shaped as to form a double deflecting line at the rear end of said vehicle.

883,179. Steering Gear for Motor Machines. Homer B. Ditwiler, Mansfield, O., assignor of one-fourth to Lewis W. Roe, Mansfield, O. Filed Nov. 7, 1907. Serial No. 401,075.

1. In a steering gear for motor machines, a steering shaft tormed with right and left screw threads, companion blocks having relatively opposite threads for engagement with the threads of said shaft, said blocks being formed with concave under faces and a yoke mounted for rocking movement and having its ends free and in constant contact with the corresponding concave under taces of said blocks.

883,202. Vehicle Brake. Edward A. Johnston, Sterling, Ill., assignor to International llarvester Company, a Corporation of New Jersey. Filed Aug. 16, 1907. Serial No. 388,761.

1. A brake mechanism for vehicles having, in combination, rotatable friction elements deriving motion from the road wheels, relatively fixed friction elements mounted upon a part of the vehicle, means for causing said fixed elements to engage with said rotatable elements, said means comprising separate rock-shafts, means for rocking said shafts in opposite directions, said means including separate lever arms secured to said shafts and extending in opposite directions from the axes thereof, a flexible connection between the outer ends of said arms, a brake controlling member adapted to be manipulated by the operator and having one end slidably engaging with said flexible connection intermediate the ends thereof.

883,207. Air Cooled Gas Engine. Cyrus B. Kurtz, Cleveland, Ohio, assignor of one-half to Frederick C. Bosworth, Cleveland, Ohio. Filed Aug. 27, 1906. Serial No. 332,127.

1. In an explosion motor, the combination with a crank shaft and connecting rod, of a cylinder open at both ends and comprising two portions having different diameters; and a hollow piston comprising two bearing portions fitted to the two portions of said cylinder, respectively, the portion of said piston having the smaller diameter being adapted in said piston's upper piston to project without said cylinder and said connecting rod being attached to such portion whereby the pin holding said connecting rod

may be removed without withdrawing the piston from the cylinder.

883,215. Seat Iron. George W. Luke, Jackson, Mich. Filed Sept. 12, 1907. Serial No. 392442.

1. The combination with a vehicle body of a seat iron secured to the inner side of the seat frame, and having an interiorly screw-threaded socket extending outwardly from the upper end thereof, a bracket support having a shank in screw threaded engagement with the socket, a check-nut on the shank bearing against the socket and a goose neck removably secured to the outer end of the bracket support being provided with a tapering aperture and the gooseneck with a corresponding foot seated in said aperture.

883,240. Internal Combustible Engine. Louis G. Sabathe, Paris, France. Filed Nov. 23, 1905. Serial No. 288,712.

1. In an internal combustion engine, the combination, with means for introducing a charge of inert gas, of means for subsequently and separately introducing a charge of combustible material and a charge of oxygen.

883,261. Wind Shield. James Webster, Chicago, Ill. Filed Feb. 6, 1907. Serial No. 356,073.

1. In a wind shield, in combination, a plurality of sections, hinges uniting adjacent sections and having a sliding engagement with one of the sections.

883,266. Starting Clutch. John F. Wilkinson, Gloucester, Mass. Filed April 19, 1907. Serial No. 369,093.

1. A clutch mechanism comprising a rotary member having an annular groove in a lateral face thereof, a stud having an eccentric head located in said groove, an arm supported so as to be movable bodily about the axis of said member by which said stud is carried non-rotatably, and driving means so engaged with the arm as to move the same both oscillatively and bodily to crowd the head of said stud between the walls of the groove and turn the said member.

883,274. Device for Carrying Spare Wheels or Tires on Motor Cars. Alfred J. Bailey, Salford, England. Filed May 28, 1907. Serial No. 376,180.

1. In combination with an automobile, a vertical standard mounted thereon, a frame extending laterally from the standard, means for swiveling the frame on the standard, and means for holding a tire to the frame.

883,340. Induction Valve for Internal Combustion Engines. Robert E. Phillips, Westminster, London, England. Filed April 22, 1904. Serial No. 204,448.

1. In induction valve mechanism for internal combustion or explosion engines of the four-cycle type, a valve casing carrying an induction valve and seat therefor and having a guide for the stem of the valve, a projection on the valve stem, a hollow plunger sliding in the casing and adapted to engage the said projection and through which the stem of the valve passes, a spring between the casing and the plunger acting to retain the valve in its closed position, and mechanical means for depressing the plunger to compress the spring and thus relieve the valve of its pressure.

Studebaker Electrics

For the Business Man

The Studebaker Electric Runabout or Stanhope is as convenient as the formerly so popular bicycle with all the comforts of the finest carriage. The fact that the car is a Studebaker is a sufficient guarantee of satisfactory performance

The Professional Man

Finds in a Studebaker Electric a vehicle of great utility and at the same time a conveyance that can be operated at very low cost.

For Women's Use

A Studebaker Victoria-Phaeton is the ideal conveyance. Its daintiness and luxury of appointment instantly appeal to her refined taste. So simple is the control that it is safer to drive than a horse, and two or three lessons are all that any woman needs to learn to drive.



Electric Victoria-Phaeton

Studebaker

AUTOMOBILE COMPANY
Main Factory at South Bend, Ind.
General Office, Cleveland, O.

GASOLINE MODELS ALSO

883,347. Compressor. Edmund W. Roberts, Clyde, Ohio. Filed Sept. 29, 1906. Serial No. 336,755.

1. A multi-stage compressor comprising in combination compression cylinders of different stages, and an intercooler comprising a hollow annulus connected to both said cylinders and surrounding one of them.

883,371. Vehicle Steering Device. George H. Young, Des Moines, Iowa. Filed May 21, 1907. Serial No. 374,929.

1. In a device of the class described, the combination of a vehicle frame, four axles pivotally supported therein, a spring bar pivotally connected with the frame, a collar mounted on the inner end of each axle, arms connecting the ends of the spring bar with the collars on the forward axles, and crossed arms for connecting the spring bar with the collars on the rear axles.

883,398. Flexible Tire for Vehicle Wheels. Clement C. Gouin, Paris, France. Filed Oct. 2, 1906. Serial No. 337,074.

1. A vehicle wheel tire consisting ecsentially of pieces of leather disposed edgewise and secured together, separate end plates secured to the respective ends of said tire and separated by a space, a securing plug filling said space, and a device mechanicall connecting said plug to said end plates and also adapted to secure the plug to the wheel rim.

883,454. Mud Shield for Vehicle Wheel Guards. George W. Dunham, Lansing, Mich., assignor to Olds Motor Works, Lansing, Mich., a Corporation of Michigan. Filed Dec. 1, 1906. Serial No. 345,918.

1. The combination with a wheel fender, of a sector shaped shield attached to one edge of said fender, a fender supporting arm, and an attachment between said shield and said supporting arm near the center of the sector.

883,461. Explosive Engine Starter. Carl C. Ilg, New York, N. Y., assignor, by direct and mesne assignments, of one-third to Nothan B. L. Cosel and one-third to Richard Frankenbush, New York, N. Y. Filed March 15, 1907. Serial No. 362,492.

1. In an explosive engine starter, the combination with an engine, of a shaft connected with the engine and by which the engine may be actuated, a wheel fitting said shaft movably, and said wheel having internal ratchet teeth, the said shaft having recesses extending lengthwise from one end the said wheel being placed on the shaft over the said recesses, pawls constructed to be inserted from the end of the shaft into said recesses after the wheel is in place and arranged to engage the ratchet teeth of the wheel, means for retaining the pawls against longitudinal displacement, and means for operating the wheel from a distance.

883,469. Roller Bearing. George A. Mc-Keel, Jackson, Mich., assignor to George A. McKeel & Company, Limited, Jackson, Mich., a partnership association. Filed Feb. 16, 1905. Serial No. 245,894.

1. In a roller bearing, two rings spaced apart and each provided on its inner face with a plurality of approximately semi-spherical spaced recesses opening through the periphery of the rim. each of said rings having a channel in the periphery surrounding each opening to form a marginal flange at the upper end of the opening, rollers having ball ends bearing in said recesses, the said flanges on the periphery of the rings surrounding said recesses overlapping the ball ends of the rollers and forming the

upper wall of the ball seat and also holding the rollers in position in the rings.

883,511. Gas Engine. George A. Beaudet, San Francisco, Cal. Filed July 19, 1907. Serial No. 384,581.

1. In a gas engine, the combination of a cylinder having an exploding chamber communicating with the cylinder space through a valve controlled opening, means operating to open the exploding chamber to the cylinder space when the cylinder is taking in gas and to shut off communication of said chamber with the cylinder space after the explosion of the charge, a valve controlled exhaust outlet leading from the exploding chamber, means operating to open the said chamber to the exhaust when said chamber is closed to the cylinder space, and to close it to the exhaust when the cylinder space is in communication with the said chamber, and a supplemental exhaust outlet leading from the lower part of the cylinder space and arranged to open said space to the exhaust when the piston is at the end of its stroke after an explosion.

883,557. Latch for Change Speed Gears for Automobiles. Emile L. P. Mors, Paris, France, assignor to The Societe Anonyme d'Electricite et d'Automobiles Mors, Paris, France. Filed Aug. 21, 1906. Serial No. 331,474.

1. The combination in shifting mechanism of an operating spindle, and a plurality of shifting rods parallel thereto and actuated thereby, and means for locking the remainder during the movement of one of the rods by said operating spindle.



Steel Tires

Full of Air.
Tire expense cut in two.

Cannot Blow Out Rim Cut or Puncture

As Flexible as Rubber Anti-Skid

Thousands in use.

Kimball Tire Case Co.

Council Bluffs, lowa

"REMY MAGNETO"

Means absolute reliability of the ignition system.

Investigate for your 1908 car.

REMY ELECTRIC CO., Anderson, Ind.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fil with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.

Fedders Radiators

will cool such cars as the Pierce, Thomas, Packard Runabout and National for 1908. How about your order.

If you want to learn about a REAL COOLER, get our catalogue.

FEDDERS MFG. WORKS, Buffalo, N. Y.

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

FRICTION DRIVEN

The car which has no clutch to slipno gears to strip-no grease-no noise.

THE \$1350 CARTERCAR

The Motorcar Company, Detroit, Mich.

SPLITDORF IGNITION

has a value all its own. Everywhere conceded to be the best in the world.

C. F. SPLITDORF Walton Ave. New York

STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Workmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model \$40. American \$25. Guaranteed Absolutely for Five Years. STEWART & CLARK MFG. CO., 509 Diversey Boulevard, Chicago, U. S. A.

THE THOMAS

America's Champion in the New York-Paris Race.

Send for map and route card.

E. R. THOMAS MOTOR COMPANY BUFFALO, N. Y.

Member A. L. A. M.



INDEX

Built to outweer an auto, and it will Sand fer Booklet Index Speed Indicator Co. MINNEAPOLIS, MINN.

McCORD Lubricators — radiators

"Marks of a Good Metor Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY

NEW YORK—Hudson Terminal, 50 Church Street. Old Colony Building, CHICAGO.









"Nothing Finer the World Over."

Hotel Pontchartrain

Cadillac Sq., Cor Woodward Ave. DETROIT, MICH.

Absolutely Fireproof.

Combines more up-to-date features than any other hotel in the country. Appeals particularly to tourists and travelers.

Conducted on European Plan. Unsurpassed Cuisine—Excellent Service.

RATES: \$2 Per Day and Upwards. PONTCHARTRAIN HOTEL CO., Props.

GEORGE H. WOOLEY. W. J. CHITTENDEN, JR., Managers

ACCY, NE

"RAJAH" SPARK PLUGS

IGNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.

THERMOID Brake Lining

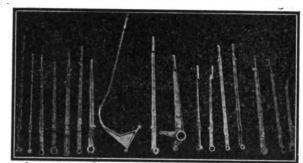
POSITIVELY WILL NOT BURN-GRIPS INSTANTLY-LASTS INDEFINITELY

Write for Particulars TRENTON RUBBER MFG. CO., 2900

2900 State Street, TRENTON, N. J.



PARSONS' MANGANESE BRONZE LEVER CASTINGS



WILLIAM CRAMP & SONS SHIP & ENGINE Philadelphia, Ponna BUILDING COMPANY.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mnffiers, Etc.

TRONG—DURABLE CALELESS—RUSTLESS MOOTH—PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY. CANTON, OHIO

Supplementary Spiral Springs

Provide SPRING INSURANCE and SPRING COMFORT.

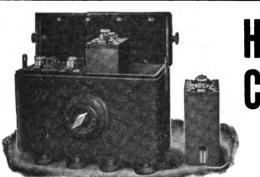
Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the "wise ones."

Let us send you our interesting booklet, and ask your dealer about them.

SUPPLEMENTARY SPIRAL SPRING CO.,

4555 Delmar Avenue, St. Louis, Mo. New York Branch—Removed to Motor Mart Building (Larger Quarters)

ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.

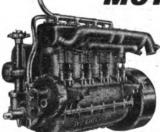


HEINZE COILS

1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909

4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor. Prices reasonable. Write for catalog and full information.

The Western Motor Co., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

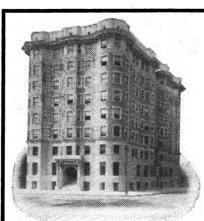
Packard Enameled IGNITION CABLE Is Always of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.
GUARANTEED HEAT, GREASE, OIL AND WATER PROOF.

Samples and Prices on Request. THE PACKARD ELECTRIC CO., - Warren, Ohio



New and Absolutely Fireproof.

Adams Ave. & Park St. **DETROIT, MICH.**

AUTOMOBILE **HEADQUARTERS**

In center of Theatre, Shopping and Business district.

and Business district.

Club Breakfast, 40c up
Luncheon, 50c
Table De Hote Dinner, 75c
A la Carte Cafe
EVERY ROOM WITH BATH
Rates \$1.50 per Day up.
L. W. TULLER Prop.
M. A. SHAW, Mgr.

This is the



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.



1908 Model D. 50 H; P.
New factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COMANY,
Broadway, cor. 56th St.
New York.

TRUCKS LOGAN

MAKE AND SAVE MONEY.

Investigation will convince you.

Write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chilicothe, O.

Show

a Mitchell. Phone "that" to any Mitchell Agent and he'll take you out if you're interested in the best value for money outlay you ever saw in the automobile line. Mitchell cars sell themselves. Prove it. Ask for catalog 18.

MITCHELL MOTOR CAR CO., RACINE, WIS.

"AURORA" THE

Runabout \$775—20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agenta.

AURORA MOTOR WORKS,

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder
Runabouta, Roadsters, Touring Cars,
15 H. P., 24 H. P., 35 H. P.
Prices, \$850, \$1,250, \$1,500, \$2,000. Jackson, Mich. JACKSON AUTOMOBILE CO.,



"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade
two and four cylinder motors, 10 to 45
horsepower. They
are equipped with
self-contained oiling
system and ready
for attaching magne to. High esgrade workmanship,
efficient, durable
and simple. Also
clutches and transSend for catalogue.

CONTINENTAL MUTOR MFG. CO., Muskegen, Mich. K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

THE MARMON

For catalog, address Dept. 16. NORDYKE & MARMON CO. INDIANAPOLIS, IND. (Estab. 1851)

TRUFFAULT-HARTFORD

SHOCK ABSORBER

Mark

The Device that made Safe, Speedy and Comfortable Automobiling Possible. Write for catalogue, Department D.

HARTFORD SUSPENSION CO.,

E. V. Hartford, Pres. 145 Bay St., Jersey City, N. J.



Eastern Inquiries Garford Motor Car Co. of New York, 1540 Broadway, New York City. Western Inquiries
Garford Motor Car Co.
of Cleveland,
1372 East 12th St.,
Cleveland.





FIFTY



The best car that America has yet produced.

Pennsylvania Auto Motor Co. BRYN MAWR, PENNSYLVANIA

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are or-dering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



THIS



s equal to any \$1.50 plug. Has big air chamber, pro-ected porcelain, bronze non-sticking bushing, won't eak,—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price—\$1.00.

THE R. E. HARDY & CO., 86 Watts Street, New York City

To Owners of Cars Costing Over \$1800

Add the nest, snappy little Brush \$500 Runsbout to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit



Muts That Require Tightening After considerable use the bolts holding the sprocket rings to the driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts
COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.



Dealers can make quick sales with this machine. The upkeep is very light; has solid rubber tires; goes through deep mud and sand, and climbs steep hills. Double cylinder, air cooled, 10-12 H. P. your loss if you don't get the agency. Write,

W. H. KIBLINGER CO.,

Box 250.

AUBURN, IND.

Apperson

"QUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Members A. L. A. M. Kokomo, Indiana.

Wico Adjustable Spark Plug



Each

Guaranteed One Year

WITHERBEE IGNITER CO.,

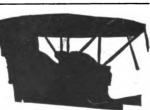
1876 Breadway, New York



Sontinem Ready-Flated Tires. They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY 1788-1790 Broadway, cor. 58th St. New York City. "Keep your eye on Continentals"

SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies** SPRINGFIELD METAL BODY CO., 366 Birnie Ave., Springfield, Mass,





For Light Runabouts

Revel Cear Drive Roller and Ball Bearings Internal Expansion Brakes

Drawings and Prices on Request.

A. O. SMITH CO.

243 Clinton Street, MILWAUKEE



SUPERIOR Etchod Name Plates

We are prepared to furnish you any kind or style as above. We shall be pleased to furnish quotations.

CHANDLER CO., Springfield, Mass.









THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE The Great Smith Car

SMITH AUTO. CO., MPRS.

TOPEKA, KANSAS

THE SAME OLD STORY
(New every race)

EISEMANN MACNETO

Voiturettes, WON Voiturette, Leon
The Targa Florio BY Driver, Guippone.
Equipped with an Eisemann Magneto LAVALETTE & CO., 112 W. 42nd St., New York

THE METEOR SO.

The Car that does things

For Particulars, Address

METEOR MOTOR CAR CO., Bettendorf, Ja.

THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

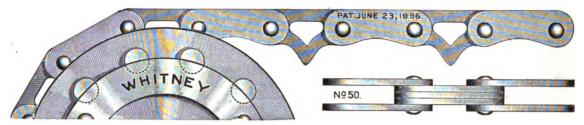
Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of

Name

Address









CONNECTING LINK





ASSEMBLED CENTER BLOCK





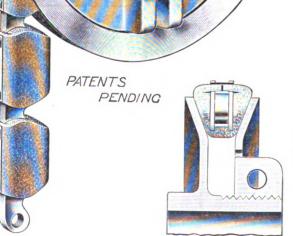
SIDE LINK with RIVETS ASSEMBLED



SIDE LINK PLAIN



OFFSET LINK



New "Whitney" CHAIN BELT and Adjustable Pulley



THE WHITNEY MFG. CO.

HARTFORD, CONN.

Large Sales

make it possible for us to import THE CELEBRATED BRAMPTON CHAINS from ENGLAND (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like THE CELEBRATED BRAMPTON CHAIN because some of the other chain makers began to copy the design and shape of the BRAMPTON CHAIN links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the BRAMPTON CHAIN than ever before. These chains somewhat resemble the BRAMPTON in appearance, but the manufacturers of such chains have been unable to copy the material—self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the BRAMPTON MOTOR CHAIN in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the BRAMP-TON FILLS THE BILL, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

We also carry in stock the BRAMPTON CHAINS to fit Foreign Cars-Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the CELEBRATED BRAMPTON CHAIN if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for BRAMPTON CHAINS, and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, \$3.50 each.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824Main St., Buffalo. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Brooklyn, N. Y.

The Irresistible Acme

AT JAMAICA, L. I. Friday. June 5th

(\$2,000 Stock Model)

Won three first prices, was first in each trial, first at all distances and first each time it started.

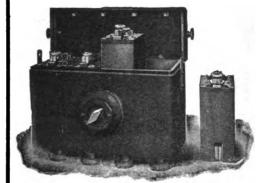
Two miles	2 minutes 7 seconds
	1 minute 33/5 seconds
One kilometer	

(The Acme six cylinder, in its class, also made two miles at the rate of 64.2 miles per hour.)

> LET US SHOW YOU AS WELL AS TELL YOU

The Acme Motor Car Co.

Reading, Pa.



HEINZE

1908 Catalog and Prices.

HEINZE ELECTRIC CO., Lowell, Mass.

Packard Enameled IGNITION CABLE

Is Always of One Quality, THE BEST

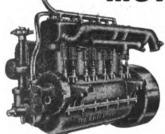


If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.
GUARANTEED HEAT, GREASE, OIL AND WATER PROOF. Samples and Prices on Request.

THE PACKARD ELECTRIC CO., - Warren, Ohio

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909 4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor. Prices reasonable. Write for catalog and full information.

THE WESTERN MCTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.



For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

> TRONG-DURABLE CAL+LESS—RUSTLESS MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY. CANTON, OHIO



Provide SPRING INSURANCE and SPRING COMFORT.

Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the "wise ones."

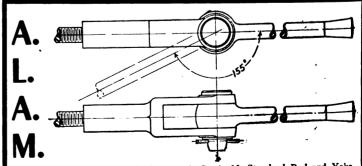
Let us send you our interesting booklet, and ask your dealer about them

SUPPLEMENTARY SPIRAL SPRING CO.,

4555 Delmar Avenue, St. Louis, Mo.

New York Branch—Removed to Motor Mart Building (Larger Quarters)

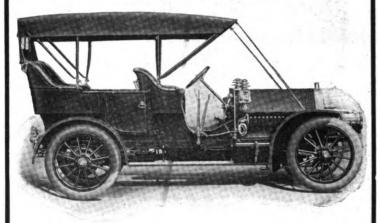
ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.



We now have in stock the new A. L. A. M. Standard Rod and Yoke Ends, both the adjustable and plain patterns, either blanks or milled. Send for new circular with full particulars.

THE BILLINGS & SPENCER CO., Hartford, Conn.





Compare following specifications with other cars at \$3,000.

36-inch Wheels. 36x4-inch Diamond, Hartford, Michelin, or Goodyear Tires. 120-inch Wheel Base. 2 Independent Ignition systems—Bosch Magneto, Connecticut Coil and Storage Battery. 40-45 H. P. 4-cylinder engine. Timken axles. Hedgeland Equalizer or Non-Skidding Device. Seven Passenger Body.

Write for catalogue. Good proposition for dealers.

THE FOREST CITY MOTOR CAR COMPANY Massillon, Ohio, U. S. A. 234 Walnut Street,

OIL **Both Sides** of the **Cylinders**



Upon perfect lubrication inside the cylinders depends the very life of your automobile. Outside the cylinders, on other parts of the automobile, it's only a question of wear. Lubrication in either case is made a scientific certainty by the use of MOBILOIL, the frictionproof, trouble-proof oil. There's a grade of

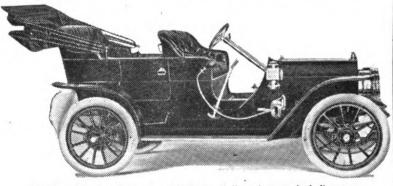
VACUUM

for your car, whether steam or gasoline, air cooled or water cooled. Our booklet, sent free on request, tells which grade of MOBILOIL to use. tains much useful information for motorists.

> MOBILOIL in barrels, and in cans with patent pouring spout, is sold by all dealers. Manufactured by

> > VACUUM OIL COMPANY Rochester, N. Y.

OAKLAND



Model B Touring Car, price \$1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, \$75.00 extra. Runabout, \$1,300.

A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense

■ The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

■ Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

PALMER SINGER

No. 18

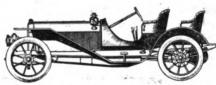
Palmer-Singer Six-Fifty. Racing Car 6 Cylinder, 60 H. P. \$2,450

Palmer-Singer Four-Thirty Skimahout 4 Cylinder, 28-30 H. P. \$1,950

All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Seven-Pass-nger Touring 40 H. P.

\$4,000



Palmer-Singer and Country Car 28-30 H. P. \$3,000

Palmer-Singer Six-Sixty, \$2,850

The Sixty-Six is a touring runabout capable of record-breaking speed and still of carrying three or more passengers with perfect comfort on long and hard runs. It will far outdistance and outwear any car of its class at even \$2,000 more in price.

Metropolitan Distributors the SELDEN Palmer & Singer Mfg. Co.

1620-22-24 Broadway, New York 1321 Michigan Avenue, Chicago



EMPIRE AUTOMOBILE TIRE COMPANY,

TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.



Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Broa. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co. Dealers are wanted in all localities where we are not now represented.

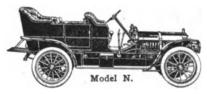
Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.



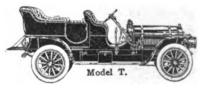
Medel K-4 cyl., 4% x 5 \$3.500

Medel N — 4 eyl., 5 x 5 \$3,700

All Nationals have two complete systems of ignition.

Medel R - 6 cyl., 4½ x4¾ \$4,200

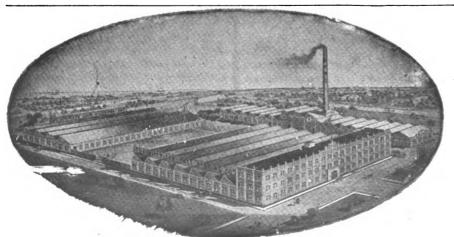
Model T — 6 eyl., 5 x 5 \$5,000



Write for particulars and our Booklet "What Owners Say
About Their Nationals."

National Motor Vehicle Co.

1007 E. 22d Street INDIANAPOLIS, IND.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L.S.& M.S. Ry. & Edgwater Park
CLEVELAND, OHIO, U.S.A.

Digitized by Google



IF a man's word as good as his bond, then he ought to be willing to give you the bond.

There's only one maker of pneumatic tires who is willing and does give his bond to back up his claims.

That's us-makers of AJAX Wrapped Tread Tires.

Every AJAX Tire sold is accompanied by a written Guarantee for 5,000 miles.

. We give you our word for AJAX qualityour bond for actual service.

Write for copy of Guarantee, stating what size tire you are using. Address Dept. A.

AJAX-GRIEB RUBBER COMPANY

GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York. Foctories: Trenton, N. J.

New York, 1776 Broadway Boston, 819-a Boylston St. Chicago, 1418 Michigan Ave. Detroit, 743 Woodward Ave.

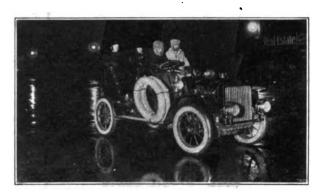
BRANCHES:

Denver, 1529 Cleveland Place
Seattle, 1102 Broadway
ve. San Francisco, 460 Golden Gate Ave.
e. Los Angeles, 1040 S. Main St.

Agents in all large cities.

INCOMPARABLE WHITE

THE CAR FOR SERVICE



New San Francisco-Los Angeles Record.

A 30 horsepower White Steamer, carrying four passengers, set up a new record from San Francisco to Los Angeles on April 28th, 1908, covering the 478-mile mountainous journey in 17 hours and 17 minutes, thus cutting 56 minutes from the former record which had stood for nearly two years. Furthermore, the record-breaking White was at once driven back over the road to San Francisco in 19 hours and 43 minutes, thus establishing a round trip record of 37 hours.

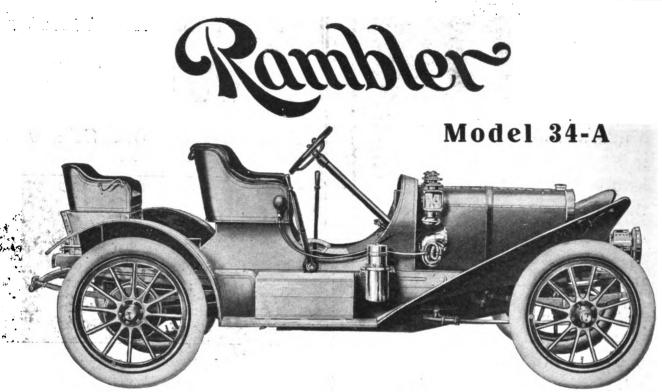
WRITE FOR CATALOG, BULLETINS AND WHITE ROUTE BOOKS

THE WHITE COMPANY

CLEVELAND, OHIO

New York City, Broadway at 62d St. San Francisco, 1460 Market St. Philadelphia, 629-33 N. Broad St. Pittsburg, 138-148 Beatty Street.

Boston, 320 Newbury St. Chicago, 240 Michigan Ave. Cleveland, 407 Rockwell Ave.



Price, \$2,250, Other Models from \$1,000 to \$2,350

HOW OUR FACTORY SAVES YOU MONEY

A PERFECT factory organization and quantity production, with a consequent saving in cost of materials and making, has enabled us to build this speedy and classy roadster with the power and endurance of a touring car and the convenience of a runabout—to sell at \$2,250.

We want you to compare this Rambler with any car on the market, even those selling at twice the price. You will see why you do not have to pay any more to get the best.

In making this comparison, notice those big 36-inch wheels and the long wheel base. These insure riding comfort. Then notice the enormous braking surface, which makes you the master in control; the accessibility of the engine, which saves trouble; the roller bearing transmission which saves wear; the offset crank shaft which utilizes the maximum power of the engine and the straight line drive which delivers that power with least possible frictional loss to the rear axle. All these features make the Rambler.

THE CAR OF STEADY SERVICE Your friend is driving a Rambler. Why not you?

Will you write today for booklets describing all models and all features?

Thomas B. Jeffery & Company

KENOSHA, WISCONSIN

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco

Volume XVIII.

New York, U. S. A., Thursday, June 11, 1908.

No. 11

DATES FIXED FOR GARDEN SHOW

To Be Held in January—Old Committee in Charge—Architects and Decorators

Already at Work.

As was expected, the week January 16-23 has been selected as the dates for the Licensed Association's 1909 show in Madison Square Garden, New York. The "independent" show in Grand Central Palace will have closed on the 7th of that month.

The choice of dates was made at a meeting of the A. L. A. M. in New York on Thursday last, at which these members were present:

J. S. Clarke, Marcus I. Brock, Autocar Co.; W. C. Leland, Cadillac Motor Car Co.; M. S. Hart, Corbin Motor Vehicle Corp.; J. H. Becker, Elmore Mfg. Co.; H. H. Franklin, G. H. Stillwell, A. T. Brown, A. E. Parsons, H. H. Franklin Mfg. Co.; E. Hewitt, Hewitt Motor Co.; A. N. Mayo, Knox Automobile Co.; S. T. Davis, Jr., Locomobile Co. of America; H. Lozier, Lozier Motor Co.; William E. Metzger, Northern Motor Car Co.; F. L. Smith, Olds Motor Works; H. B. Joy, Packard Motor Car Co.; C. Clifton, George N. Pierce Co.; A. L. Pope, Pope Motor Car Co.; George Pope, Pope Mfg. Co.; E. D. Shurmer, Royal Motor Car Co.; G. E. Mitchell, Alden Sampson, 2d; R. H. Salmons, Selden Motor Vehicle Co.; E. McEwen, F. B. Stearns Co.; C. C. Hildebrand, Stevens-Duryea Co.; E. S. Church, Waltham Mfg. Co.; Thos. Henderson, Winton Motor Carriage Co.

The old show committee was re-elected, viz.: Col. George Pope, chairman; Marcus I. Brock and M. L. Downs, secretary. Architects and decorators already are at work on the decorative scheme, which it is probable will be ready early next month.

Spare Wheel of America Reorganizes.

Largely as a result of a visit of two of the English directors of the concern, the sales department of the Spare Wheel Motor

Co. of America, Ltd., in Chicago, has been completely reorganized and additional facilities have ben installed in the factory at St. Anne. Ill. All of the men who represent the company in Chicago were released and the management of the sales department turned over to George S. Morrow, who previously had had to do with the Spare Wheel in trests in New York. The company, which controls the Stepney wheel in America, likewise has removed its headquarters from the third floor of a Chicago office building and is now located in a commodious street floor salesroom at 236 Michigan avenue, where the public better can be interested and its spare wheel practically demonstrated. The injunction suit which had been brought against an alleged violator of the Stepney patent is being pressed for a quick decision.

Prest-Q-Lite has Another Explosion.

For the third time within less than a year the Prest-O-Lite company's plant in Indianapolis, Ind., was badly damaged by an explosion on Saturday, 6th inst. The previous ones were at the old plant in South East street, the latest occurring at a new plant at 211 East South street. It was in reality a series of explosions, the first, for which no cause has been determined as yet, being followed by others resulting from the fire caused by the first. St. Vincent's Infirmary, located nearby, was somewhat damaged, and a city fire house was wrecked. The total loss is estimated at \$10,000. The company has under construction still another plant in a more sparsely built up section, to which it purposed removing all the business of charging when completed.

New Reliance Company Succeeds Old One.

The Reliance Motor Truck Co., just incorporated in Michigan with a capital of \$250,000, has taken over the business of the Detroit company of the same name. It will locate in Owosso. The officers of the company are: President, Fred O. Paige. Detroit; vice-president, A. M. Bentley, Owosso; secretary-treasurer, W. F. Benkelman, Owosso.

ROYALTY REDUCED 20 PER CENT

Courts Authorize Revised Agreement with Selden Licensees—Limitation Placed Upon Yearly Maximum.

Despite the opposition brought to bear by those who dearly would love to bring about the embarrassment of anyone or anything interested in the Selden patent, the United States Circuit Court for the New Jersey District, last week granted the application of the receivers of the Electric Vehicle Co. for permission to reduce the amount of royalty heretofore exacted of the holders of Selden licenses. Following the decision of the Federal Court, the Superior Court of Connecticut promptly extended its approval of the plan.

The facts that all the licensees are included in the Association of Licensed Automobile Manufacturers and that all save two of them had refused to make overdue payments, alleging that the amount of royalty imposed was "excessive and oppressive," induced several imaginations to discern in the situation the early disruption of the A. L. A. M. Of this, however, there was not at any time any likelihood.

Under the existing agreement, the licensees are obligated to pay 1½ per cent. of the catalog price of all vehicles they produce, except such as may be exported, on which the royalty is ½ per cent. Payments are required to be made quarterly, a discount of 20 per cent. being allowed for payments within 15 days, thus making the net royalty 1 per cent.

The revised agreement, which just has been authorized by the courts, will reduce the royalties of the licensees by 20 per cent., with the further limitation that the maximum royalties to be paid in any one year shall not exceed \$250,000. It also will provide that should a decree be entered adjudging the Selden patent invalid, the royalties shall, pending an appeal from that decision, be paid to the trustee to await the

outcome of the appeal. In addition, certain modifications of the terms upon which new members to the Association may be admitted, and surrenders to the Association control of litigation to compel payments of royalties in excess of the maximum annual amount of \$250,000 above referred to. The "terms for new members" are understood to be a matter of phraseology.

In substance, the new agreement means that henceforth the total revenue in royalties from the Selden patent will not exceed the sum of \$250,000 annually. The 20 per cent. reduction in the royalty will bring the proportion from 11/4 to 1 per cent., which, less the 20 per cent. offered for cash 15 days, will make the net royalty 8-10 of 1 per cent. There will be no change in the basis of division between the Electric Vehicle Co. and the A. L. A. M. As at present, the former will retain three-fifths and pay to the association the remaining twofifths. On this basis, if the maximum amount, \$250,000, is reached, the Electric Vehicle interests will receive \$150,000 and the A. L. A. M. \$100,000.

Dealers' Complaints to be Investigated.

After a meeing of the directors of the National Association of Automobile Dealers, held in Chicago last week, it was officially given out that there were taken up "complaints from members in various parts of the country about the methods employed by some of the jobbers and certain tire makers and automobile manufacturers in disposing of their product. The secretary was instructed to inquire into the circumstances surrounding the matters complained of and to communicate with the various firms and try to adjust these matters to the satisfaction of the complaining members, and if possible in a manner that will prove of lasting benfit to both sides."

Cabs and Motorcycles at Palace Show.

Taximeter cabs and motorcycles both will be featured by the American Motor Car Manufacturers Association at its show in Grand Central Palace, New York, December 31-January 7. Special sections will be set apart for the display of each type of vehicle. It is probable that the same idea will be carried out at the Association's show in Chicago, to select the building and complete the arrangements for which General Manager Reeves now is in that city.

Kitto-Pugh Litigation Reaches Last Suit.

W. H. Kitto, who was secretary of the defunct Motor Components Mfg. Co., of Des Moines, Iowa, has made a settlement with A. D. Pugh, who sued him for \$1,000 for attorney's fees. By a payment of \$500 he secured dismissal of the suit. There yet remains of the batch of suits and countersuits between the two men Kitto's suit against Pugh for \$10,000 damages, based on Pugh's alleged "queering" of Kitto in other transactions.

The Week's Incorporations.

Chicago, Ill.—Swinehart Clincher Tire & Rubber Co., under Illinois laws, with \$200,000 capital; Ohio corporation dealing in rubber tires.

Rockport, Mass.—Lands End Motor Co., under Massachusetts laws, with \$10,000 capital. Corporators—C. Burton Martin, Arthur Fairweather, Anne McCarthy.

Greenfield, Mass.—Reliance Motor Bus Co., under Massachusetts laws, with \$10,000 capital. Corporators—George H. Wright, Charles G. Bascom, Winnie L. Bascom.

Boston, Mass.—Supplementary Spiral Spring Co., under Massachusetts laws with \$10,000 capital. Corporators—Henry D. Crowley, Mary E. Lucey, Anne E. McGrail.

Indianapolis, Ind.—Commercial Motor Vehicle Co., under Indiana laws, with \$10,000 capital. Corporators—Carl Moller, William H. Thomas, Otto M. Moller, L. H. Adams.

East Orange. N. J.—Atlantic Motor Car Co., of New Jersey, under New Jersey laws, with \$12,000 capital; to deal in automobiles. Corporators—C. O. Geyer, F. C. Ferguson, F. E. Ruggles.

New York, N. Y.—Fox Metallic Tire Belt Co., under New York laws, with \$100,000 capital; to manufacture automobiles, etc. Corporators—W. A. Malone, A. E. Smith, W. H. Klock, New York City, N. Y.

New York City, N. Y.—Empire Taxi-Motor Cab Co., under New York laws, with \$10,000 capital. Corporators—James S. McLean, Arthur A. Ernst, Edward R. Wells, 437 Fifth avenue, New York City, N. Y.

Buffalo, N. Y.—Pioneer Spring Hub Co., under New York laws, with \$100,000 capital; to manufacture spring hubs for automobiles, etc. Corporators—W. A. Hyde, Syracuse, N. Y.; G. H. Ismon, G. L. Lerch, Buffalo, N. Y.

New York City, N. Y.—Vulcan Storage Battery Co., under New York laws, with \$25,000 capital. Corporators—Franz Sigel, Charles E. Lansing, 38 Park Row, New York City, N. Y.; William Knobloch, Williamsbridge, N. Y.

New York City, N. Y.—Northern Chemical Co., under New York laws, with \$25,000 capital; to manufacture dust allayer known as "florozone." Corporators—E. J. Magen, H. Roth, New York City, N. Y.; L. E. Stubenvoll, Jersey City, N. J.

New York City, N. Y.—Cedarhurst Motor Livery Co., under New York laws, with \$10,000 capital. Corporators—Peter T. Radiker, Nellie F. P. Radiker, 159 West Eightyseventh street; Mary C. Pease, 269 West Eighty-fourth street, New York City, N. Y.

In the Retail World.

D. D. Baskerville is to open a new garage in Madison Wis., and will handle the Mitchell cars.

The Moon Sales Co., which will handle the Moon car in New York, has located at 2182 Broadway. S. L. Patton and W. H. Miller, of Oklahoma City have opened a garage at Ranch Creek in that State.

The Bond Motor Car Co., Bradford, Pa., are making ready to erect a new garage; the plans therefor already are in the contractor's hands.

The Orange Garage Co., Orange, N. J., are building a new garage. It is claimed that when completed it will be one of the finest in the State.

The Wheeling (W. Va.) Automobile Co. has been discharged from bankruptcy. The concern got into difficulties several months ago, but has succeeded in weathering the storm.

Work has started on the new garage for the Orange Auto Co., in Main street, East Orange, N. J. The building will be of brick one story high, with a frontage of 40 feet and a depth of 175 feet.

Creditors of H. W. Berthiaume, a San Francisco dealer, have filed a petition to have him adjudged bankrupt. The petitioners are the Boyer Motor Car Co., H. W. Bogen, Inc., Cuyler & Co., and the Weinstock-Nichols Co. Their claims aggregate \$1.061.

The Columbia Garage, Spokane, Wash., will remove to the old National Iron Works property in that city. Plans are under consideration for the erection of a brick annex, 60x80 feet, to be used as a garage, the old building to be used as a machine and repair shop.

The partnership of Williams & Crafvy, which has been operating in Worcester, Mass., as the Worcester Motor Car Co.. has dissolved, Williams having purchased the interests of Crafvy. Williams will continue the business under the old name and will handle the Franklin line of cars exclusively.

Phelps Brown, who hitherto has been in the newspaper business, has purchased an interest in the Indianapolis Motor Car Co., of Indianapolis, Ind. He will become the company's "financial agent." His associates in the company are Alfred Markham, who holds the office of president, and Paul Smith, who is secretary-treasurer.

The Pendleton Automobile Co. Franklin, agents at Pendleton, Ore., are building a fine new garage, 90 by 100 feet. This is to be equipped with first-class machinery and will be one of the finest garages in the northwest. It is asserted that the State of Washington contains more Franklins than any two other makes, 186 being in use there.

Charles A. Haskin has taken over the interests of his two partners in the W. A. Frederics Co., Boston, Mass., and the business has been incorporated under Massachusetts laws as the American Automobile Co., capitalized at \$60,000. Haskin is president and general manager, with Edwin C. Hayden as vice-president, B. R. Dorman, treasurer, and W. A. Webber, secretary.



POPE RECEIVERS RENDER REPORT

Some Interesting Figures Brought Out in Petition for Further Authority—Huge Claim Against Pope-Toledo.

The report of the receivers of the Pope Mfg. Co., which accompanied their petition to the Chancery Court of New Jersey for permission to continue the business, proves to be an interesting document.

It discloses, among other things, that in addition to the claim for \$787,987.84 filed against the Pope Motor Car Co., Toledo, Ohio, there is standing against the latter concern on the Pope Mfg. Co.'s books a debit of \$1,000,000. The smaller amount, for which a claim has been legally filed, is for "moneys paid out for and advanced to the Pope Motor Car Co."; the round million is for a dividend declared by the latter company and later rescinded by its board of directors. No claim has been filed for the million dollars, but the time within which such a claim may be lodged with the courts does not expire until Monday next, 15th inst. There is no intimation, however, that such action will be taken.

The receivers report that they have made and disposed of 500 Pope-Hartford cars, and the operations at the Hartford factory since the appointment of receivers up to May 1st, 1908, have resulted in a net profit of approximately \$215,890.20, and the profits for the year ending July 31st, 1908, have been estimated at the sum of \$405,022.80.

Up to May 1st the Pope company's Westfield (Mass.) bicycle factory has earned a net profit of approximately \$35,797.49, which it is believed will be increased to \$69,399.47 by July 31st next. The Hagerstown (Md.) plant, which is used chiefly for building the Pope jobbing bicycles, had been carried on at a net profit of \$17,546.85 up to May 1st.

On May 19th last, there was in the possession of the receivers apointed by the New Jersey court or by the ancillary courts in the various respective districts the following sums:

New Jersey	\$ 405,041.70
Connecticut	338,061.22
Massachusetts (not including In-	•
ternat'l Trust Co. \$9,407.49)	54.530.12
Maryland	89,481.68
New York	
Illinois	24,312.36
The receivers in all jurisdiction	ons had on

 May 19, 1908, outstanding and uncollected:

 Connecticut
 \$138,293.29

 Massachusetts
 119,484.42

 Maryland
 67,862.59

 Illinois
 7,416.91

 New Jersey
 24,607.27

\$357,664.48

In applying for permission to continue the business and to make plans and purchases for next season, the receivers reccommend that they be authorized to manafacture 700 Pope-Hartford 1909 models and 50,000 bicycles. As stated in the Motor World last week, the hearing on their petition will be held June 17th,

Rogers Arranging the Mitchell "Jubilee."

G. Vernor Rogers, secretary of the Mitchell Motor Car Co., left for the Pacific Coast this week to complete the arrangements for the second annual jubilee of Mitchell owners, which will take place in and about San Jose, Cal., July 3d and 4th. It is expected to prove the largest gathering of owners of a particular brand of cars that ever has occurred.

The affair will open on July 3d, with the annual hill climb, the prizes for which will range from silver cups to luncheon outfits and clocks. Timing will be by telephone and the first car will be sent away at 3 o'clock in the afternoon. The next day the party will leave San Jose for Del Monte, taking luncheon there at 2.30 in the afternoon. Club house privileges will be accorded the visitors. The Del Monte Hotel management has offered special prizes for a time limit run around the 17 miles drive.

British Imports and Exports.

British imports of foreign cars and parts during the month of April fell away no less than \$716,725 as compared with the returns for the corresponding period of last year. Only 480 complete cars were imported, which together with the 228 chassis and parts to the value of \$610,680, brought the total importation to \$1.920.7 5, as against a total of \$2,637,490 last year, and \$2,016,145 for April, 1906. The business of exporting British products to foreign ports revealed a small gain. There were exported 168 cars, valued together at \$291,-230; 18 chassis, valued at \$37,365, and parts to the value of \$163,260, making a total of \$491,855 a \$30,000 gain over last year.

Big Wheat Crop Makes Brisk Business.

"Whatever may be the case in other parts of the country," one day this week remarked a man in the trade, who is in position to speak by the cards, "business in that part of the United States that lies between Chicago and Denver is as good as any one can ask; and when I say 'business,' I mean not merely the bicycle business, but business of all sorts. The farmers have money and are spending it, and, as the official statistics show the wheat crop as being one of the largest on record, there seems no reason why the present conditions should not continue."

Southern California Dealers Elect Officers.

Without opposition the following officers were elected by the Automobile Dealers' Association of Southern California: President, William E. Bush; vice-president, R. C. Hamlin; secretary, H. O. Harrison; treasurer, Captain H. D. Ryus. The retiring secretary's report showed that \$1,181 remained in the treasury at the close of the fiscal year.

SUMMER MEETING OF ENGINEERS

Program of Business and Pleasure at Detroit—Who Will Speak and What Will be Discussed.

Preparations for the annual summer meeting of the Society of Automobile Engineers, which will be held in Detroit, June 25-27, are now complete, and the program prepared by the special Detroit entertainment committee gives promise of one of the most interesting gatherings that the Society has ever had. The meeting will be opened Thursday a. m., June 25, with a business session of the Society, followed by attendance at the launching of a 10,000-ton lake steamer in conjunction with the American Society of Mechanical Engineers. One of the local plants will be inspected in the afternoon of that day, and in the evening papers on "Autogenous Welding," by E. S. Foljambe, and "The Storage Battery in Automobile Work," by Bruce Ford, will be read.

Friday morning the members will join in the continued discussion of the paper on "Clutches," by Henry Souther, at the session of the A. S. M. E., and in the afternoon a trip will be taken up the St. Clair in a steamer. In the evening a dinner will be held, and it will be followed by the reading of a paper on "Some Recent Developments in Magneto Ignition," by Otto Heins; a number of lantern slides, showing the development of the gas engine ignition during the past 25 years, will be shown.

Saturday morning the plant of the Packard company will be visited, followed by a luncheon tendered the society at the Detroit Boat Club by J. G. Rumney, of the Detroit Steel Products Co., and there will be an automobile run through Belle Isle Park and environs during the afternoon. In the evening there will be a business session, followed by the reading of papers on "The Unit System of Power Transmission," by Frank Beemer, and "The Increased Efficiency of Single Motor Drive," by A. L. Dixon.

The Detroit committee of arrangements is composed of H. E. Coffin, chairman. Henry Ford, Russell Huff, James H. Herron, and Alanson P. Brush.

Two Big Companies May Consolidate.

What has been known for several weeks to many persons in the trade finally has found its way into print, i. e., a mooted consolidation of the Buick and Maxwell-Briscoe companies. Some reports state that the deal practically has been completed, but those most interested deny these statements. Before mestion of the matter appeared in print, Benjamin Briscoe, while admitting that negotiations were in progress, stated that any mention of the subject would not be relished.



He'll get you sure!

YOU CAN'T ESCAPE!

There's only one way out of it—you cannot "protect" against the puncture devil, even by overloading your wheels with heavy armor which destroy the resiliency of your tires.

Why not meet your puncture face to face and when he stabs your tire, laugh him to scorn—produce your

STEPNEY SPARE WHEEL

and be on your way in less than a minute.

The Stepney Spare Wheel clamps to the rim of your wheel without removing your punctured tire.

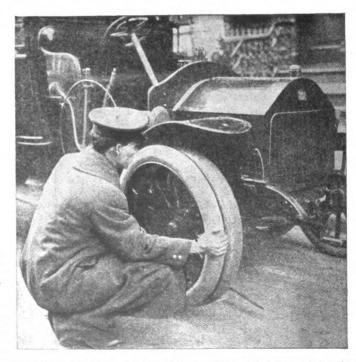
When you finish your journey remove the Stepney and repair the puncture.

WRITE FOR DESCRIPTIVE MATTER, PRICES, ETC.

THE SPARE MOTOR WHEEL OF AMERICA

(Limited)

CHICAGO 236 Michigan Ave. NEW YORK OFFICE 341 Fifth Avenue





Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Subscription, Per Annum (Postage Paid) . \$2.00 Single Copies (Postage Paid) . . . 10 Centa Foreign Subscription \$4.00 Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

La Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 11, 1908.

Beware of the Cheap Inner Tube!

One of several factors that brought discomfiture to the bicycle industry and which caused, and still is causing, much annoyance to riders, was the tire built for sale rather than for use. And what has been, and to a limited extent now is, true. the bicycle business, is becoming evident in the automobile trade. While reputable tire manufacturers take pride in their product and have their name and trade mark appear prominently on every article which they produce, the maker of another grade of goods has no such feeling toward his output and sends forth his production with neither name nor sign to designate its "birthplace."

The nameless tire seemingly has one attraction, its price. But it is a fleeting attraction; for cheap tires, like other cheap wares, are the most expensive in the end, and "the end" is not for off. Fortunately

for bargain hunters, not much has been done by unknown concerns in the matter of making outer shoes or casings, but of late there have been numerous outcroppings of unbranded and nondescript inner tubes. With neither name, number, nor distinguishing mark, and without reputation or with an unmeaning guarantee, they are offered to automobilists "at a price." They were produced for no other purpose.

It is recognized that the life of a tire is affected by the heat to which use subjects it. In the hot days of summer the heat of the pavement adds much to the heat generated by the compression of the air contained in the tire, and the cheap production of second hand rubber will stand but little of this strain before it becomes an annoyance and source of continual trouble. Undoubtedly, the nondescript inner tube will this summer cause much trouble for which the maker of the casing will be damned, and whether the latter will not be justified in taking measures to protect himself is a pretty question, the answer to which inclines strongly toward an affirmative. The reputable manufacturer of a high class casing has a right to expect that it will not be used in connection with a cheap tube; for in many respects the quality of the tube is quite as important as the quality of the remainder of the tire.

Advance of Moderate Powers and Prices.

An inevitable consequence of the vast development which has come over the industry is the stratification of the market into sections or groups of vehicles each of which is characterized by qualities answering to the needs of a specific class of users. Viewed in this light it is possible to discern a growth in favor on the part of the car of medium power and medium price which would be simply amazing were its causes not distinctly apparent.

How rapid this growth is, may not become readily appreciable until the end of this season, or even later. But the relative volume of business done in cars of say, 20 to 30 horsepower, and costing somewhere about \$2,000, is a token which has not been lost on the makers. A large number of such cars are already on the market, and their popularity, as a class, is unquestionable. Still others are in process of construction, however, which are destined to create no small stir when their features and their origin are announced.

While the moderate priced car always has

been pre-eminently the American product, such a movement in the foreign market last year and this, resulted in the production of a great number of such cars, by makers who up to that time had been identified only with the most exclusive and costliest vehicles. Their success may be taken as a forecast of the extension here by makers of the same class.

The crux of the matter is this: The motorist, instead of the maker, is beginning to dominate the market. He is learning to demand what he wants, even as he has learned his requirements—in a positive fashion that is not to be gainsaid. The value of display, of luxurious fittings and high power are being contrasted with the actual enjoyment which may be derived from them. The individual buyer is learning that certain types of machine are as unfit for him personally as they may be appropriate to others. Users are beginning to buy cars strictly within their means.

Special Performances and Their Effect.

Buyers of new cars, in their enthusiasm and confidence are largely in a class by themselves. Usually their faith in the recent acquisition is unbounded, their credulity as to its powers childlike, and their dejection when it fails to come up to their fullest expectations pathetic. For it frequently happens that new cars do not develop as well as they are expected to, and though a large amount of such failure may be charged to the poor adjustment and stiffness of new mechanism, there are several other causes which lead to the same result and which breed discontent for the owner as well as unhappiness for the agent with whom he deals.

Perhaps the most moving cause instrumental in undermining the new owner's opinion of his new machine is the purely human one best expressed in the ancient text for lyceum debate beginning: "The pleasures of anticipation—" and setting forth how the apple does not always taste as good as it looks. The wholly natural shortcomings of the new mechanism are more momentous when it has been in use just long enough to have grown familiar, than when a longer acquaintance has made clear their causes.

Another reason for discontent is the contrast drawn between the performance developed by the demonstrating car when on trial, and the performance developed by the private machine when driven by its owner,

not to mention the contrast between the demonstrator's stories of what can be done with it, and the facts as they appear to the buyer. The invariable tendency is not to make proper allowance for the splendid performance of the specially tuned demonstrating machine in expert hands, and to be over-credulous in accepting the recommendations of the salesman or driver, whose eagerness to succeed and whose partiality to the machine in question offer a strong temptation to the tracing of nebulous rainbows.

In all this, the wise dealer may find food for thought. The time has passed when the salesman of integrity will permit a machine to go into the hands of a driver who is not familiar with at least the rudiments of good driving and car maintenance. Many dealers go far beyond the actual requirements of the case by insisting upon overlooking the training of the owner and supervising the early performance of the machine, merely for the purpose of ensuring for it a creditable performance. And it is a particularly hopeful sign that the proportion of dealers of this class is especially great among those who handle low and medium priced cars.

Nevertheless in many cases the new owner is encouraged in establishing an expristant valuation on the ability of the machine. The desire to excel in sales business produces a strong temptation to the use of the spectacular in demonstration and publicity work, and while the dealer, or the manufacturer himself, may have no intention of producing the impression that the car will thrive under such treatment, or will give such results under any sort of handling, such an impression is apt to be fostered by an over-zealous method.

The maker with the reputation—the maker who succeeds—and the agent who succeeds, are the hard headed business men who so contrive as to crystalize first impressions into lasting impressions, and to make the performance realized even more gratifying than the performance anticipated. It is a difficult undertaking. But it is possible to enumerate more than one growing business of which this is a characteristic.

Tinkering that Injures Reputations.

It is a queer phase of human nature that prompts a man, who would not permit of anyone but a first class jeweler resetting a stone in his wife's ring, to allow his chauffeur, or his mechanic—if he employs one—to make alterations in the running mechanism or power plant of an equally or more expensive automobile; and yet how often is this done.

While it stands to reason that the mechanism of a car must be considered in its entirety, i. e., that each part is closely related to every other part, and while any one with a grain of sense must realize that manufacturers and designers have as many or greater opportunities than private chauffeurs or mechanics for observing and studying the designs and ideas embodied in other cars, yet owners will permit alterations to be made or devices incorporated by their own employes, until frequently it is true that a well built, efficient car acts like a mule or becomes much like a junk wagon.

Often where a transmission case is designed to be lubricated by heavy oil, the chauffeur finds that, for personal reasons, he would prefer to use grease. The owner listens to the arguments in favor of the latter, which his employe advances, and then gives his consent for such alterations as may be necessary—or thought to be necessary. The transmission case is taken apart, oil screens are removed, large holes are drilled here and there, grease cups are substituted, and almost radical alterations are made. Like as not a grease reservoir becomes a part of the dashboard equipment and a pipe from it is run through the flooring and around the levers until finally it terminates in a coupling and bushing which goes into the transmission case; and what was a simple lubricating system thus becomes a complicated series of piping, grease cups and what-not. And merely because the chauffeur recommended it.

Obviously when a car has gone through any such alteration, the manufacturer's responsibility for its performance ceases. The car has been guaranteed to do certain things but the guarantee applies only if the mechanical construction remains intact. It is not to be expected that any manufacturer will shoulder the responsibility for the acts of an independent mechanic and naturally he will not assume the blame nor claim the credit for a car which has undergone radical alterations after it has left his control.

It is safe to assume that the way to obtain the best results from any article is to leave well enough alone. So called "improvements" seldom improve. It is rare that the chauffeur or chauffeur-mechanic

COMING EVENTS

June 13, Cleveland, Ohio—Cleveland Automobile Club's annual hill climb.

June 13, Philadelphia, Pa.—Quaker City Motor Club's race meet at Point Breeze track.

June 13, Cleveland, Ohio.—Cleveland Automobile Club's hill climbing contest up Cady hill.

June 18, Washington, D. C.—Washington Lodge of Elks' race meet at Bennings track.

June 20, Oakland, Cal.—California Woman's Automobile Club's endurance run to San Jose and return

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 34, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 4, Lowell, Mass.—Lowell Automobile Club's 250 miles road race on Merrinac boulevard.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

can improve on the mechanical design of one whose life work is designing.

If a car does not suit, buy one which does, but do not attempt to make over one to accomplish the purposes of some other, and above all things, don't let a chauffeur have free rein to make "improvements" until the maker of the car has expressed an opinion as to whether or not the proposed changes will prove beneficial. Chauffeurs have a fiendish inclination for "tinkering," and "tinkeritis" has become the mainstay of many repairmen who live by undoing the mistakes of would-be "experts."

AMERICAN ROAD RECORDS SLASHED

Twenty-six Fast Events on Straightaway
Course at Jamaica—Big Day's Sport
Without Hitch or 'Accident.

Everybody from Queens, a number of persons from Kings, and some from other counties journeyed out to what is known as Hillside avenue, near Jamaica, Long Island, on Friday, 5th inst., to witness the straightaway speed trials. Thousands of spectators lined the course, the grandstands at the finish were comfortably filled, while hundreds of cars parked in good positions along the smooth level boulevard.

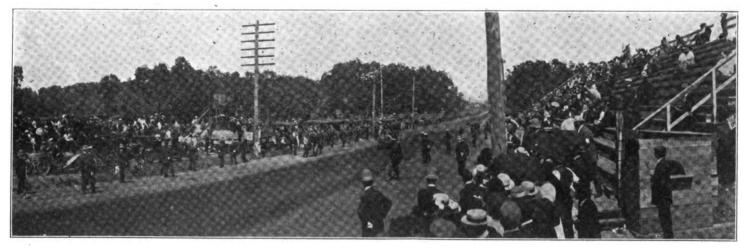
formance of each car was announced within five seconds of the time it flashed by the red flags denoting the finish tape.

The twenty-six events were run at three distances—one kilometre, one mile and two miles—with several classes at each distance. All American road records were broken. Harry Kilpatrick, driving the Vanderbilt cup race Hotchkiss car, made the fastest times of the afternoon. In the kilometre trials he scored 24½ seconds in the free-for-all, a rate of 90 miles an hour. In this event Morton Seymour in the Christic car finished second in 26½ seconds. While practicing the day before Seymour had broken the radiator off the Christic car and it could not be replaced in time for the meet. As the result Seymour was afraid

won in the mile trials, covering the distance in 57½ seconds. McDermott was second and Woods third.

In the class for four cylinder cars selling above \$4,000, Stearns cars made the fastest time in all but the one mile, which was won by Caleb Bragg, De Dietrich, in 51% seconds. The Stearns also won all three of the six cylinder events.

One class that attracted a great deal of attention was that for Briarcliff cars, those with piston displacement of 301 to 550 cubic inches. John Lang, driving a duplicate of the car which won the Savannah challenge trophy and the Briarcliff cup, was victorious three times. He covered the kilometre in 273% seconds, and the mile in 421% seconds, while his time for two miles



TYPICAL VIEW OF THE COURSE AT JAMAICA, SHOWING A SPEED TRIAL

It was "automobile day" of the subway celebration that Jamaicans have been holding, and in the excitement of watching the automobiles fly over a stretch of road at much better than a mile a minute, the side show features of the celebration, such as wild west shows, baseball games and balloon ascensions, were entirely ignored.

With no less than 26 events on the program it is not surprising that the meet lasted until after some persons' supper hour, but at that the events were run with better dispatch than was thought possible and almost every car came in for honors. One might naturally suppose that in a meet of this character the most attention would be given to the big racing cars, but such did not seem to be the case. After several stock cars covered the different stretches at rates of speed better than a mile a minute the crowd began to focus its attention upon the stock cars, and the drivers of this class machines received just as much applause after a record-breaking run as did the pilots of the mastodons.

The policing and official arrangements were excellent and there was not a hitch from start to finish. The police made it impossible for the crowds to encroach upon the course and there was no long waiting for the announcement of times. The timing was done automatically and the per-

to go farther than one kilometre because of the danger of overheating. Kilpatrick covered the mile in 38¾ seconds, a rate of 93.3 miles an hour, and in the two miles trials his time was 1:19½. The special event for the Jefferson DeMont Thompson cup, at two miles, also was won by Kilpatrick in 1:20½. In the one mile free-forall George Robertson in a Fiat was the runner-up, finishing in the same position in the two miles event. John Lang, Isotta, was second in the race for the Thompson cup.

Mitchell cars had things their own way in the classes for cars under \$1,250, O. R. Delamater winning all three events at the various distances. C. P. Skinner, Mitchell, was the runner-up in two of the events. An Acme car, driven by C. A. Patchske, did the same stunt in the class for cars selling between \$1,251 and \$2,000, while Leonard Zengle, Pennsylvania, made the best time at the three distances when the class for cars from \$2,000 to \$3,000 was decided.

Honors were divided in the class for cars costing between \$3,001 and \$4,000. In the kilometre trials W. A. Woods, Cleveland, beat J. P. McDermott, Stevens-Duryea, by nearly seven seconds, and in the two miles event W. W. Burke, Mora, beat Woods, who in turn finished in better time than McDermott. T. F. Cheesborough, Thomas,

was 1:29%. These figures were equalled only in the free-for-all. The loss of Emmanual Cedrino, who was killed before the Pimlico races in Baltimore, on the Fiat car, was keenly felt. Cedrino had been expected to drive the Fiat in these events, but his place was taken by J. H. Parker. Parker made a good showing, but he could finish only second to Lang each time. J. M. Seymour, on a Simplex, got third place in all three events.

Mitchell cars were the heaviest scorers among the American cars, with the exception of the big Stearns, which competed in more events. Mitchells won three firsts and two seconds, and with five points for a first and three points for second place, it ran up a total of 21 points, as shown in the following table:

Car.	1st	2d	3d	Pts.
Stearns	5	4	2	39
Isotta	4	1	1	24
Mitchell	3	2	0	21
Hotchkiss	4	0	1	21
Fiat	0	6	2	20
Acme		0	1	16
Pennsylvania .	3	0	0	15
Thomas	1	3	0	14
Cleveland	1	1	1	9
Palmer & Singe		3	0	9
Corbin	0	2	1	7
Stevens-Duryea	0	2	1	7
De Dietrich		0	1	6
Mora	1	0	0	5
Ilaynes		1	2	5

Pullman 0 1 1 4 Pope-Hartford 0 0 3 3 Ford 0 0 3 3 Simplex 0 0 3 3 Christie 0 1 0 3 American 0 0 1 1 Jackson 0 0 1 1 5 points for first, 3 points for second, 1 point for third.	D. D. Holmes, Midland
One Kilometer. Gasolene cars under \$1,251. Driver and Car. O. R. Delamater, Mitchell	D. E. Farrell, Stearns 1:49 66.1 Caleb Bragg, De Dietrich 1:51 64.9 H. Johnson, Mercedes 1:54 63.2 James Doig, Stearns 1:55½ 62.4 Arthur Warren, Stearns 2:09 55.8
C. A. Patchske, Acme 0:3834 W. E. Shuttleworth, Haynes 0:4234 K. R. Manzille, Palmer & Singer 0:4234 Bob Burman, Jackson 0:44 Gasolene Cars \$2,001 to \$3,000 L. Zengle, Pennsylvania 0:34 J. W. Swan, Corbin 0:3534 Phil Hines, Pope-Hartford 0:3835	Special Class for Thompson Cup W. Kilpatrick, Hotchkiss 1:20½ 89.8 John Lang, Isotta 1:28½ 81.1 J. H. Parker, Fiat 1:34 76.8 Wally Owen, American 1:40½ 71.8 Ralph De Palma, Allen-Kings 1:45 68.6 Jack Rutherford, Peerless 1:56½ 62.0 H. E. Trevor, Mercedes 2:08½ 56.0
Robert Morton, Pullman 0:39 1/5 J. A. Kline, Pullman 0:39 3/5 Joseph Kenny, Ford 0:44 3/5 Wally Owen, Imperial 0:42 Gasolene Cars \$3,001 to \$4,000. W. A. Woods, Cleveland 0:35 4/5 P. J. McDermott, Stevens-Duryea 0:42	Six Cylinder Cars, Over \$2,500. C. F. Alcott, Stearns 1:363/5 E4.5 E. F. Buchanan, Thomas 1:49 65.9 C. B. Rogers, Acme 1:52%/5 64.2 Stephen Carousso, Hotchkiss 1:53 63.1 J. P. Disbrow, Ford 2:003/5 59.7 W. W. Burke, Mora 2:241/5 49.9
Four-Cylinder Cars Over \$4,000. D. E. Farrell, Stearns 0:331/5	Free-for-all, Any Types and Power. H. Kilpatrick, Hotchkiss 1:191/5 90.9
Arthur Warren, Stearns 0:33¾ H. Swan, Stearns 0:33¼ H. Johnson, Mercedes 0:33¼ James Doig, Stearns 0:34½ Caleb Bragg, De Dietrich 0:35	Geo. Robertson, Fiat Cyclone. 1:51% 64.4 A. P. Hedrick, Pope-Hartford. 1:59% 60.1 Stock Chassis, 301 to 550 Cubic Inches Displacement.
Six-Cylinder Cars Over \$4,500. C. F. Alcott, Stearns 0:284/5 E. F. Buchanan, Thomas 0:32 J. P. Disbrow, Ford 0:361/5 S. Carousso, Hotchkiss 0:374/5	John Lang, Isotta 1:29 % 80.7 J. H. Parker, Fiat 1:32 % 77.6 J. M. Seymour, Simplex 1:44 % 69.0 A. Gentile, Pennsylvania 1:46 % 67.5 L. Zengle, Pennsylvania 1:55 62.7 A. L. Hedrick, Pope-Hartford 1:57 61.3
Free-for-all, Any Type or Power	ONE MILE.
H. Kilpatrick, Hotchkiss	Gasolene Cars Under \$1,250. O. R. Delamater, Mitchell 1:16½ 47.2 C. P. Skinner, Mitchell 1:16½ 47.1 R. T. Johnston, Ford 1:30½ 39.9 F. J. Nolte, Ford Disabled
John Lang, Isotta 0:273/5 J. H. Parker, Fiat 0:284/5 J. M. Seymour, Simplex 0:32 L. Zengle, Pennsylvania 0:323/5 A. P. Hedrick, Pope-Hartford 0:361/5 A. Gentile, Pennsylvania 0:37 H. A. Harkin, Mercedes 0:44	Gasolene Cars \$1,250 to \$2,000. C. A. Patchske, Acme
TWO MILES.	Bob Burman, Jackson Retired
Gasolene Cars Under \$1,250. Driver and Car. Time. Av. O. R. Delamater, Mitchell 2:32 47.4 C. P. Skinner, Mitchell 2:41½ 46.2 F. J. Nolte, Ford 3:33 33.8 R. J. Johnson, Ford 4:16 29.0 Gasolene Cars \$1,251 to \$2,000. C. A. Patchske, Acme 2:07 58.2	Gasolene Cars \$2,001 to \$3,000 L. Zengle, Pennsylvania 0:55 65.5 R. Morton, Pullman 0:5645 63.4 J. W. Swan, Corbin 0:5716 62.4 Philip Hines, Pope-Hartford 1:0226 57.7 I. A. Kline, Pullman 1:0336 56.6 Joseph Kenny, Ford 1:05 55.4 D. D. Holmes, Midland 1:12 50.0 J. B. Owen, Imperial 1:0816 52.8
K. R. Manzille, Palmer & Singer	Gasolene Cars \$3,001 to \$4,000. T. F. Cheesborough, Thomas . 0:571/5 62.4 P. J. McDermott, Stevens- Duryea
Gasolene Cars \$2,001 to \$3,000. L. Zengle, Pennsylvania	Four Cylinder Cars Over \$4,000. Caleb Bragg, De Dietrich

Special Mile-Thompson Trophy. John Lang, Isotta 0:4245 84.1 Six Cylinder Cars Over \$2,500. Free-for-al, Any Type or Powe-r H. Kilpatrick, Hotchkiss 0:3834 93.3 Geo. Robertson, Fiat Cyclone . 0:4634 77.0 A. P. Hedrick, Pope-Hartford . 0:5834 61.2 E. F. Buchanan, Thomas Disabled Stock Chassis, 301 to 550 Cubic Inches Displacement. John Lang, Isotta 0:421/5 J. H. Parker, Fiat ... 0.473% J. M. Seymour, Simplex 0.51 L. Zengle, Pennsylvania 0.51½ A. Gentile, Pennsylvania 0.573% 70.6 70.3

Lowell Race Plans Encounter Opposition.

A. P. Hedrick, Pope-Hartford . 0:58

It seems scarcely probable that the projected 250 miles road race in Lowell, Mass., will be run despite the fact that the common council had voted to grant the exclusive use of certain streets by the Lowell Automobile Club "for the purpose of speed tests on July 4th." The Lowell Automobile Club had laid out a 10 miles course through and around the city, and when the consent of the council had been obtained, not alone for the race, but for daily practice drives between the hours of 4 a. m. and 6 a. m., for the seven days previous to the 4th, they planned to have the biggest automobile race ever held in Massachusetts.

But their hopes have been dashed to earth. The city solicitor has rendered an opinion that the council has no authority to set aside streets for such a purpose. As a result of this opinion, the mayor has refused to sign the order, and the acting governor of the State has notified the automobile club that the law will not permit him to grant the club's request for the use of the State militia to patrol the course of the proposed race.

And if these set-backs are not sufficient to discourage the promoters of the contest, there is another in the shape of court proceedings which are threatened by a committee of tax payers who will apply for an injunction restraining the contestants from using the course, on the ground that public safety would be endangered by the running of such a contest.

Strange to say, however, the Waltham authorities have granted permission for a repetition of the motorcycle road race which was held July 4th last year. At that time. when the legality of the procedure was in question, Secretary Fletcher, of the State Highway Commission, called the Mayor of Waltham to task, but later "drew in his horns" and pleaded that the commission had no right to interfere.

GREAT SPORT ON DEAD BORSE HILL

All Local Records Shattered at Worcester's Annual Climb—20,000 Spectators Present—Only One Near-Accident.

From every standpoint—numerical, sporting, social and record-breaking—the third annual hill climbing contest of the Worcester Automobile Club held on Dead Horse hill near that city on Saturday afternoon last, 6th inst., was a pronounced success, results being better than even the sanguine expectations of the promoter had hoped for. The weather was ideal and a crowd estimated at 20,000 enthused over the events.

run. The first away was J. B. McKinney's Peerless, and it reached the summit in 1:15\(\frac{1}{2}\)s. Then came L. Lorimer, Thomas Detroit, and he finished in three-fifths of a second faster. These two drivers, with the addition of Morgan Kent, Stearns, made up the event for gasolene cars from 40 to 60 horsepower, and McKinney won in 1:16. The event was remarkably contested as Kent's time was 1:16\(\frac{1}{2}\)s and Lorimer's 1:16\(\frac{1}{2}\)s.

It was in the free-for-all that the crowd began to get excited and in this event were scored one of the two fastest times of the climb. L. F. Baldwin, driving a Stanley steam car, won the event in 57%, with Haupt, Chadwick Great Six, a close second in 59 seconds. This was the fastest time made by any gasolene car during the day.

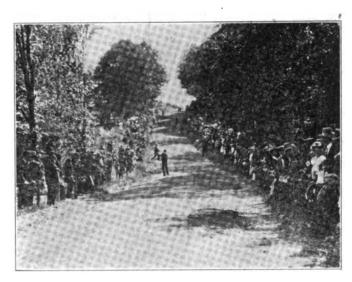
The crowd held its breath once when the limb of a tree broke and a venturesome young fellow started to parachute toward the earth, clutching the broken branch in one hand. However, as he passed another limb, he reached out and clung to it safely.

limb, he reached out and clung to it safely.
"Send the ambulance quick," megaphoned
Murphy to the official stand, "There's a
broken limb to be set."

Of course the crowd laughed as it did later when one facetious local wag named Batter came up and asked Murphy the score. "Batter out," said Murphy, giving the man a push back into the line, and then he lighted a cigar. This last pun rather frazzled his nerves. Taken all in all the hill climb was a success with a big "S," and the crowd seemed sorry when Announcer Murphy told







VIEW LOOKING UP THE HILL

When the gasolene laden atmosphere had cleared it was found that L. F. Baldwin, of Providence, had shattered all records for the club, doing the one mile grade in 55% seconds. The old record was 1:01%. William Haupt, who carried off the honors at the Wilkes-Barre climb, made the best time for gasolene cars, doing it in 59 seconds.

For general all round honors the Thomas-Detroit cars made a great sweep, cleaning up four first prizes, three seconds and two thirds. Stevens-Duryea cars ran away with two of the events in which they were entered. These were captured by the "Little six", as the "big six" was protested on account of the shape of its body. The Peerless car got two firsts and two seconds. The Maxwell scored a first and a second.

The events were handled admirably and there were no delays and not an accident was reported during the afternoon. Everything went along like clockwork, and the first cars started nearly on time at 1.30 p. m., and the last car had climbed the hill at 5 o'clock. The hill was in better shape for racing than it was last year, as it had been treated with a preparation of calcide that kept down the dust.

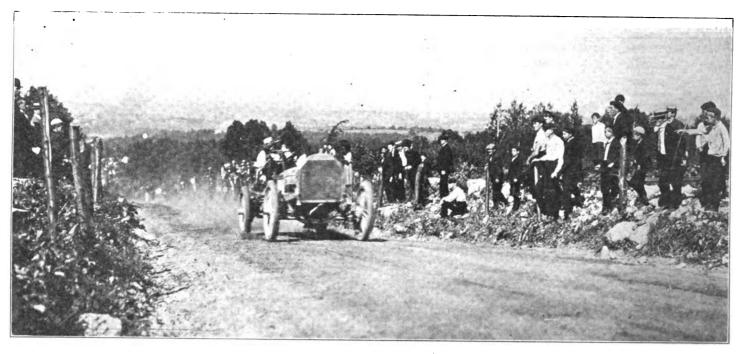
The first event started was for high-powered gasolene cars and only two made the It was in the exhibition trials that Baldwin broke the record for the hill when he steamed up in 553% seconds, a remarkable flight. Haupt also essayed the trials and his time was four-fifths of a second slower than in the free-for-all. The nearest approach to an acident was when Haupt made his first trial. He was steering with one hand when he ran over a stone in the roadway near the finish. The big car swerved and for an instant it looked as though the judges' stand would be swept out of the way. Haupt recovered control in a second and guided, the car back on the course and across the finish line.

F. D. Everett, driving a steam car, won the Worcester county amateur championship in 1:16. J. S. Harrington, Thomas-Detroit, was the only other contender, but he made a close race of it by reaching the summit within four-fifths of a second of Everett's time.

It takes many little things to make up the interest in a hill climb and one person that contributed a great deal to the success of the Worcester event, not discounting the excellent work done by the officials in running the events off in record-breaking time, was "Jim" Murphy, the man with the megaphone. Murphy let loose a lot of Irish wit.

the crowd to get ready for the great "Supper Handicap Retroclimb," which he explained would run downhill, the destination being wherever their supper "steaks" happened to be broiling. The summary:

be broning. The summary:
Gasolene Caçs, 60 to 75 H. P.
Driver and Car. Time. L. Lorimer, Thomas-Detroit, 1:15 J. B. McKinney, Peerless 1:153/5
Gasolene Cars, 40 to 60 H. P.
J. B. McKinney, Peerless 1:16 Morgan Kent, Stearns 1:16% L. Lorimer, Thomas-Detroit 1:163%
Gasolene Cars, 24 to 40 H. P.
S. H. Hancock, Stevens-Duryea 1:15 L. Lorimer, Thomas-Detroit 1:17 O. Light, Thomas-Detroit 1:20% J. Dower, Corbin 1:20%
Gasolene Cars, 15 to 24 H. P.
C. M. Stanley, Buick 1:49 J. E. Pugh, Overland 2:4245
Free-for-all Amateur; Gasolene
Stock Cars.
J. S. Harrington, Thomas-Detroit 1:18% J. L. Snow, Peerless 1:1845 F. E. Wing, Marmon 1:53
Free-for-all.
L. F. Baldwin, Stanley 0:57 % W. Haupt, Chadwick 0:59 H. T. Grout, Berliet 1:03 1/5



GENERAL VIEW LOOKING DOWN DRAD HOPSE HITT

. CHARLET VIEW COOKING DOWN DEAD HORSE HILL							
Gasolene Cars, \$850 and Less. W. Pollard, Maxwell	Gasolene Cars, \$1,251 to \$2,000. E. P. Blake, Jackson	Record Trials. W. Haupt, Chadwick					
F. F. Cameron, Cameron 1:45% Gasolene Stock Cars, \$2,001 to \$3,000. L. Lorimer, Thomas-Detroit 1:15 O. Light, Thomas-Detroit 1:16% W. Bourque, Knox 1:20%	\$4,000. P. J. Robinson, Stevens-Duryea 1:15 A. J. Andrews, American 1:19¾ F. E. Wing, Marmon 1:41½ Gasolene Cars, \$4,001. and Over. J. B. McKinney, Peerless 1:16½	W. Haupt, Chadwick 0:59 \(\frac{1}{2} \) H. F. Grout, Berliet 1:02 \(\frac{2}{2} \) Motorcycles F. C. Hoyt, Indian 1:04 \(\frac{2}{2} \) H. F. Clark, Indian 1:29 H. Clark, Indian 1:31					



F. L. BALDWIN, STANLEY, BREAKING DEAD HORSE HILL RECORD

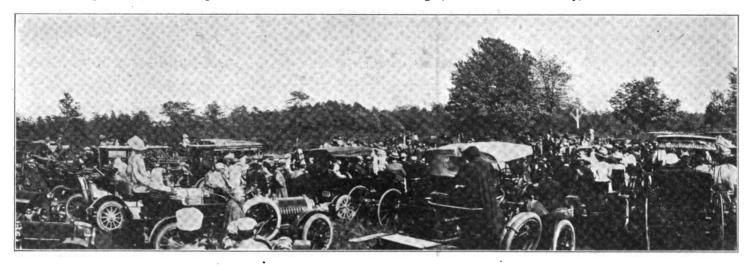
WORK BEGINS ON MOTOR PARKWAY

Pardington Turns First Sod and Blows up Thirty Trees—Addresses by Vanderbilt, Hotchkiss and Others.

After 18 months of promise, the Long Island Motor Parkway assumed tangible proportions last Saturday afternoon, 6th inst. when the work of constructing the first section was inaugurated with befitting cere-

was presented by Mr. Pardington. After paying tribute to the revolutionizing tendencies of the automobile, some of the trials attendant upon the inception of the immediate project were recounted.

'We are here to-day to celebrate the commencement of work on a road, which when completed, will give the world one more mode of transportation," Mr. Pardington read. "There have been in the past highways for all kinds of vehicular traffic, canals for the movement of freight, railroads of way many unforeseen obstacles. But land owners in almost every case, seeing what a benefit a road of this character would be to their property, gladly came forward with help, enabling us to complete a 45-mile right of way. Now came the panic. Hard times were ahead, and it looked serious for the undertaking. Discouraging reports were circulated and other difficulties appeared. Nevertheless, with all these trials and tribulations, money slowly came into the treasury, and one obstacle after another



ASSEMBLAGE GATHERED TO WITNESS BEGINNING OF WORK ON MOTOR PARKWAY

monies on what is known as the "Barnes Tract." on the Jerusalem road, near Central Park, L. I. In the absence of W. K. Vanderbilt, Jr., president of the company, who, because of the critical illness of a relative was unable to be present, A. R. Pardington, the general manager of the Parkway company, assumed the initiative in turning the first spadeful of earth and pressing a button which set off thirty charges of

for the transportation of passengers, and trolleys for the convenience of those living in the suburbs of our large cities, but in no case has the motorist been considered.

"Although but a few years in existence, the automobile has come into such prominence that it has revolutionized all modes of travel. Distance has been eliminated, highways improved, unknown districts opened up, and pleasure given to thousands.

was set aside. So that here we are, 18 months from the time the company was incorporated, ready to turn over the first spadeful of dirt, and this fall will see ready for use ten miles of Motor Parkway."

Speaking of "The Occasion and Its Meaning." Judge William H. Hotchkiss, president of the American Automobile Association reverted to the tendencies of motor traffic to turn the current of population



MUSIC AND ORATORY PRECEDE GROUND BREAKING



A. R. PARDINGTON TURNING THE FIRST SOD

giant powder, ripping up as many trees which encumbered the right of way, and thus signaling to the hundred laborers who were at hand, to commence operations.

Previous to this spectacular demonstration, a number of addresses were read, including one which had been prepared by Mr. Vanderbilt, but which in his absence And now the day of the automobile has come. A highway is about to be constructed for its use, free from all grade crossings, dust and police surveillance and a country opened up whose variegated charms are hard to equal in any part of the world.

"We have encountered in our preliminary work of raising funds and procuring right away from the cities, and building on the idea of the Motor Parkway, forecasted the probable extension of such schemes, and even suggested the possibility of elevated motor roadways connecting the great cities with such trunk lines of automobile traffic.

"To-day at this place, the motor vehicle, as it were, takes to the rails," he said.

"Like its predecessor, the steam car, it too has found the public roads at times uncomfortable. . . . If there was need for such a road as this—and no one here will gainsay such need—is there not need for similar roads near other great centers of population, and will they not certainly be built?

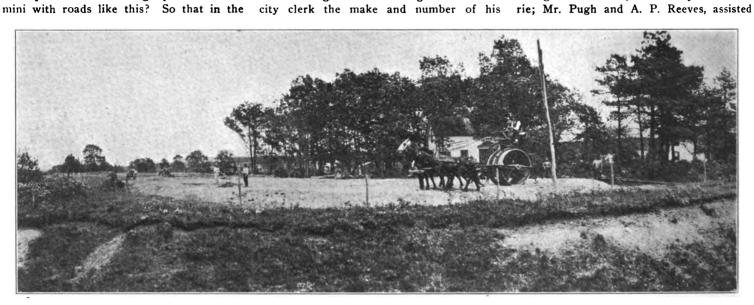
"Carry the thought further. If such needs exist, how long will it be before the cities, particularly our great metropolis, yielding to the demands of a majority of the people—for sooner or later a majority will drive motor cars—will build elevated steel pavements up and down and across their precincts connecting up at their termini with roads like this? So that in the

Suffolk county. There will be no grade crossings, either with highways or railroads, and the entire course will be over a private right of way, properly fenced and safeguarded, and will be 100 feet in width and about 50 miles long. The estimated total cost of the enterprise is set down at \$2,000,000 or thereabouts.

Utica Requires Local Registration.

Although the State law requires the registration of automobiles, the common council of Utica, N. Y., has made a radical move by enacting an ordinance calling for local registration. It requires every automobile owner living in Utica to register with the city clerk the make and number of his

furnished the lunches free for everyone. The parade was divided into ten divisions. and was made up of children from the Hebrew Sheltering Guardian Society, New York Home for Destitute Crippled Children, Phelps School and Home for the Children's Aid Society, Industrial School of the Children's Aid Society, Leake and Watts Orphan House, Protestant Half Orphan Asylum, Howard Mission and Home for Little Wanderers, and the Mott Street Industrial School. Those in charge of the divisions were: Col. G. C. Pardee, assisted by J. F. Plummer; Mr. Broadhead and Mrs. J. N. Cuneo, assisted by Mr. Disbrow; George W. Bennett, assisted by F. C. Car-



ROAD MAKING ON THE LONG ISLAND MOTOR PARKWAY

end we shall have pavements and roads built for the motor vehicle and to be used only by it."

August Heckscher, a director of the Parkway corporation, who has long been identified with the good roads movement on Long Island, spoke of the importance of the Parkway as an accession to the rapid transit of the local resident. A no less significant phase of the benefit to be derived from the realization of the plans under way, namely their effect on the realty values of adjoining territories, was discussed by Milton l'Ecluse, representing the Long Island Real Estate Exchange. The appreciation of the affiliated motorists was voiced by Russel A. Field, secretary of the Long Island Automobile Club, while John C. Wetmore. the orator of the New York automobile press, also delivered a few earnest words.

The present plan is to complete 10 or 12 miles of the Parkway this summer. A section, 22 feet in width and running from Central Park, L. I., to Lake Ronkonkoma, will be ready by the 1st of October, it is promised, and will be used as a porton of the course for the forthcoming Vanderbilt cup race. Ultimately the parkway will stretch from the Brooklyn city limits to Riverhead near the shore of Peconic Bay,

machine. No registration fee is required; the object of the registration being "to identify those who violate the speed ordinance.' It is not easy to determine the necessity for this local ordinance as the provisions of the State law cover the same object. However, 88 cars have been registered, and other owners may or may not follow suit as they see fit, no penalty having been provided for failure to obey the law.

New York Orphans on Their Outing.

Minus some of the circus characteristics which have been much in evidence on similar occasions in the past, the fourth annual automobile outing of New York orphans occurred on Tuesday, 9th inst. While there was lots of enthusiasm amongst the youngsters as they prepared for their trip to Luna Park, which had been donated for the day by its proprietor, there was a moderation on the part of the givers which made the affair more like an act of benevolence than a press-agented display of unfortunate little ones.

Fifteen hundred children shared in the good time. The automobile dealers contributed 140 cars and R. M. Owen, the New York agent for the Reo and Premier cars,

by F. Cimiotti, Andrew J. Cone and I. H. Manning.

Gliddens Rest from Globe Girdling.

Having travelled 46,528 miles of the 50,000 which they purpose travelling, Mr. and Mrs. Charles J. Glidden returned to New York on the Campania last Saturday. On their last trip these installment globe girdlers drove through Syria, being the first American automobilists to take a car into that country. They also visited Italy, France, Monaco and Egypt. In many parts of the old world the governors of the various provinces provided armed guards as an escort. Mr. Glidden said the armed guards were necessary in Egypt to protect travellers from bands of Bedouin brigands. The Gliddens visited the Holy Land, and when they arrived at Jerusalem about 10,000 natives inspected the machine. He said the roads in Syria were fearful and it was often necessary to have the car pulled along over bad stretches.

Eight events have been scheduled for the meet to be held at Wildwood-by-the-Sea, N. J., on July 4th. It will be preceded on July 3d by a regularity run from Philadelphia.

OMAHA SEES FIRST HILL CLIMB

Nine Events Well Contested on West
Dodge Road—Nestman Makes Best
Time up One-Mile Slope.

Omaha's first hill climb held on Decoration Day on the mile incline on the West Dodge road, attracted about 2,000 people and was pronounced a success, although the officials had the time of their lives in keeping the course sufficiently clear for the contestants to start. After the first three events the crowd seemed to realize the danger of standing in the way of the oncoming machines and then the meet ran smoothly.

The nine events were well contested, the chief prize in each being a silver cup, donated by the promoter, the Omaha Automobile Club. A variety of merchandise, donated by the merchants of the city, made up the subsidiary prizes, revolvers, a dozen live squabs, a briar pipe, brass humidor, and a box of cigars being among the list.

O. P. Nestman, driving a Stevens-Duryea, made the fastest time of the day when he climbed the mile slope in 1:16 in the free-for-all event. G. B. Craven, Buick; Charles Smith, Stoddard-Dayton, and Brick Kuhn, Holsman, were among the other prize winners. The summary:

Gasolene cars listed at \$1,000 and under—Won by G. B. Craven, Buick, 1:47%; second, A. C. Hartman, Buick, 1:49.

Gasolene touring cars listed between \$2,250 and \$3,000—Won by Charles Smith, Stoddard-Dayton, 1:223; second, Carl Holt, Rambler, 1:513.

Gasolene cars listed between \$1,000 and \$2,000—Won by A. C. Hartman, Buick, 1:44; second, Carl Holt, Mitchell, 1:451/4; third, Berger, Buick, 1:491/5.

High wheel motor buggies—Won by Brick Kuhn, Holsman, 2:534%.

Gasolene touring cars listed between \$3,500 and \$4,250—Won by Charles Smith, Stoddard-Dayton, 1:23½; second, O. P. Nestman, Stevens-Duryea, 1:25½; third, O. C. Shea, Packard, 1:27½.

Gasolene runabouts listed between \$2,100 and \$3.000—Won by Charles Smith, Stoddard-Dayton, 1:23; second, O. P. Nestman, Knox, 1:25; third, A. H. Fetters, Stoddard-Dayton, 1:28.

Exhibition against time—By R. R. Kimbill, Stanley, 1:20.

Gasolene cars. free-for-all—Won by O. P. Nestman, Stevens-Duryea, 1:16; second, Charles Smith, Stoddard-Dayton, 1:251/5; third, Rollo Smith, Thomas, 1:281/5.

Gasolene cars costing \$4,000 and over—Won by O. P. Nestman, Stevens-Duryea, 1:19½; second, H. C. Carr, Packard, 1:20½; third, Charles Smith, Stoddard-Dayton, 1:22.

Oregonians See Their First Road Races.

With characteristic western enthusiasm 10,000 people witnessed last Thursday, 4th

inst., the first road race ever conducted in that part of the Pacific coast. The two events were conducted by the Portland (Ore.) Automobile Club. One was a race of 58.4 miles, the other of 102½ miles.

The course had been oiled and scraped and throughout its entire length of 14.4 miles was patrolled by the State militia. The cars, however, had hard luck; tire trouble played havoc with most of them, and of the seven starters in the shorter race only two finished.

The winner was H. M. Corey, of Portland, who drove a Cadillac over the 58.4 miles in 1:13:20. William Slimmons, of San Francisco, in a White, was second, in 1:20:44. The 102.4 miles race had 11 starters, but only three finished. H. Bell, Spokane (Studebaker), won in 2:04:08; second, N. R. Cooper, Seattle (Studebaker), 2:18:47; third, Fred Dundee, Rutland (White), 2:28:59.

Microscopic Measurements for Grand Prix.

"Splitting hairs" is not in it with the exactness with which the measurements are being made of the cars entered for the Grand Prix, as was made plain when Count de la Vallette, the measuring official of the sporting committee of the Automobile Club of France recently arrived in England for the purpose of measuring and stamping the cylinders of the English entrants for the race.

The Count was supplied with gauges which were passed and stamped by the French government. He made the statement that his gauges had been certified to be 155 mm. at 15° C, and were so sensitive that if warmed by the heat of his hands they would not enter any cylinders that would be accepted for the Grand Prix. The Count further declared that when he had warmed the gauges by holding them in his hands, he would not pass any cylinder that they would then enter.

It also was announced that the gauge for the overall outside width of a car consisted of two rigid gate posts set at the exact width, through which all entered cars would would be required to pass. All cars would have to be equipped with a crank case and a transmission case so arranged as to make it possible to look into them, so that there could be no doubt that the oil was entirely drained before weighing. If this arrangement could not be made the bottom of the cases would have to be removed.

The French official also was responsible for the statement that most of the French entrants were designed with all of the valves on one side, and that they were long stroke engines with small valves.

At the annual meeting of the Cedar Rapids (Iowa) Automobile Club the following officers were elected: President, E. C. Clark; vice-president, Dr. W. J. Morrison; secretary, A. E. Durin; treasurer, J. L. Bever, Jr.; club captain and steward, G. M. Averhill.

HAMLIN FIRST IN HALF CENTURY

Establishes a Pacific Coast Record at Los Angeles Meet—Kussman in Native Car Wins Two Events.

Before a crowd of 5,000 spectators at Agricultural Park track, Los Angeles, Saturday afternoon, 30th ult., Ralph Hamlin drove a Franklin "six" 50 miles in 57:43. His fast ride establishes a record for the Pacific coast for stock cars on a circular track. Three miles before the finish an official in the judges' stand signalled Hamlin to slow down, and if it had not been for this unaccountable interference Hamlin probably would have made even better time. probably would have made the distance in even better time.

starting in a two-bunch lineup in this order: Ralph C. Hamlin, Franklin; George Kussman, Tourist; Seifert, Stoddard-Dayton; Hal Stone, Pullman; Lester Pattee, Cadillac; McGeehee, Cartercar; Dan Kuhl, Stearns; Gregory, Moline Limited, and George Barnes, Haynes.

Hamlin took the lead at the start and for 23 miles did not have to take the dust for any of them. In the 21st mile Seifert began to crawl up and after a neck and neck spurt lasting several laps he passed Hamlin. The excessive speed proved disastrous to Seifert, however, and at the 35th mile Hamlin had regained the lead. From then to the finish it was nothing but Hamlin, and he lapped Kuhl and Pattee coming into the stretch of the 37th mile. In the next mile Seifert withdrew. The remaining 12 miles were covered with the first three cars in the same relative positions, Kuhl getting second, and Pattee third. Barnes had been compelled to quit after running 16 miles in fast time and the other drivers had gone these distances when the race was finished. Stone, 36 miles; Mc-Geehee, 34; Kussman, 35, and Gregory, 30 miles.

Only two drivers lined up for the five miles for small runabouts, and Gump, Jackson, was unable to make any kind of a showing against Roe, Ford. The former quit after two miles and the latter enjoyed a walkover finish in 4:3236. The summaries:

Three miles for runabouts costing \$900 and under—Won by A. E. Roe, Ford; S. N. Gump, Jackson, did not finish. Time, 4:3236.

Three miles for touring cars costing \$1,600 and under—Won by George Kussman, Tourist; second, McGeehee, Cartercar. Time, 4:051/5.

Five miles for cars costing \$1,601 to \$2,-500—Won by George Kussman, Tourist; second, Seifert, Stoddard-Dayton; third, Copeland, Jackson. Time, 6:19.

Fifty miles free-for-all stock cars—Won by Ralph Hamlin, Franklin; second, Dan Kuhl, Stearns; third, Lester Pattee, Cadillac. Time, 57:43.

"AROUND THE CLOCK" ENDURANCE

First Contest of the Sort on Pacific Coast—
Nine of Eleven at Finish Have
Perfect Scores.

Nine drivers were awarded perfect scores on the result of the 24 hours endurance contest which commenced Saturday, May 30th, and was held under the auspices of the Automobile Dealers' Asociation of California over what is known as the San Leandro course. It was the first 24 hours event of its kind to be held on the western coast, and so far as is known, the first "around the clock" ever undertaken on the public highway by drivers of touring cars. There were 15 starters, of whom 11 finished.

The course, which scaled about 27½ miles to the lap, followed the sides of a rough triangle, with San Leandro as the starting and finishing point. The 12 laps were scheduled to be run on a time allowance of 2 hours each, but no restrictions were placed on the drivers as to running time, except for the 6th and 12th laps, which had to be completed within 3 minutes of the 12th and 24th hours. The times were checked for each lap, however.

Of the two cars completing the 570 miles, but failing of perfect scores, the Franklin, driven by Peter Callender, and carrying four passengers and an observer, was disqualified because its gasolene supply failed between controls. Notwithstanding, it finished on schedule time. In the case of L. C. Miller's Cadillac, a penalization of 36 points resulted from a broken commutator wire. Gus Boquet's Tourist and D. E. Whitman's Rambler were withdrawn on the first lap, while F. J. Wiseman's Reo and F. O. Renstrom's Pullman stopped on the 6th and 10th, respectively.

Beginning at two o'clock Saturday afternoon, the cars were despatched on five minutes headway. The first lap was covered by most of the cars at pretty high speed, in a hysterical effort to establish plenty of lead over the clock in order to forstall any emergancies. None of these, arising, howeve, the succeeding laps were for the most part covered with a fair degece of regularity and leisure. The Autocar driven by E. E. Bodge signalized itself by sticking closest to the 2 hour per lap schedule.

A most unusual circumstance in connection with an event of this general nature, was the fact that the officials were enabled to announce the final results on Sunday afternoon after only about a half hour's work. Those who finished with perfect scores, and the cars which they drove, were as follows: E. L. Peacock, Mitchell touring car; Frank Murray, Buick runabout; Max Rosenfeld, Peerless touring car; H. E. Anthony, Stoddard-Dayton roadster; R. G. Fowler, Pope-Hartford touring car; J. H. Eagal, Studebaker touring car; E. S. Mar-

tin, Mitchell runabout; Ray McDonald, Tourist touring car; and E. E. Bodge, Autocar runabout.

Indecisive Run-off at Kansas City.

Although 17 cars were tied in the 145 miles endurance run which the Automobile Club of Kansas City held on May 16th, there were only nine starters in the run-off which occurred on Saturday, 9th inst., for the purpose of breaking the tie. Of the nine starters, seven finished, but who won is a question which has not been decided. The day after the second run, the judges announced that it would be several days before a decision could be reached. While J. F. Moriarty, Stevens-Duryea, was the first to arrive back in Kansas City, H. Holtzhaurer, Pope-Hartford, made better time and claims the prize. The others who finished, and whose scores have not been announced, are H. E. Rooklidge, White; W. S. Hathaway, Maxwell; M. C. Nolan, Stevens-Duryea; C. J. Simons, Oldsmobile; W. M. Goodrich, Studebaker; Roy Sanborn, Stanley. Fletcher Cowherd, Corbin, did not

Nazzaro Claims New World's Record.

In England, where they do not appear to know as much about American records as they ought to know, Felice Nazzaro, the Italian driver, is credited with having on June 8th, made a world's record by covering a lap on the Brooklands track, near London, at the rate of 120 miles per hour. But in 1906, Demogeot, on the Ormond (Fla.) beach, covered two miles straightaway in 581/5 seconds, or at the rate of 122.4 miles per hour, and as Marriott flashed the mile in 281/5 seconds or 124 miles per hour, Nazzaro's performance is not so wonderful as may appear, although it was, of course, made on a concrete track requiring a circuit. The Brooklands track, 211-16 miles per lap, is in many respects practically two parallel straightaway courses, connected by scientific curves.

Status of New Jersey Licenses.

To settle a moot question, New Jersey's Attorney General has rendered an opinion on the validity of automobile licenses issued prior to April 16, 1908, the date the amended Frelinghuysen law went into effect. The Attorney General holds that licenses issued in the period from January 1, 1908, to April 16, 1908, are good for a full year, but is of the opinion that there shall be no pro rata license fees for the fraction of a year remaining between the expiration of a license taken out in 1907 and December 31 of this year.

New England Tour for A. C. A. Members.

The Automobile Club of America will conduct a members' tour, June 18-28, from New York through the Naugatuck Valley. Berkshire Hills, and the White Mountains to Poland Springs, Maine, and return. It will be in charge of Waldron Williams.

MANY VICTORS ON VALLAMONT

Ward, Matheson, Makes Best Time at Williamsport Hill Climb—Accidents at the "Hairpin" Curve.

Vallamont Hill, a terrestrial protuberance near Williamsport, Pa., was peopled by a crowd estimated at 10,000 on Saturday afternoon, 6th inst., when the second annual hill climb of the Williamsport Automobile Club was held. The crowd was rewarded by seeing Charles W. Ward in the Big Six Matheson better his record of last year by going up the mile incline in 1:403/5. His time last year was 1:59. They had also the sensation of seeing the same driver go over a steep embankment through the loss of a tire at a sharp curve known as the "Hairpin." This was in the 13th event on the program. Ward fortunately escaped injury.

In the free-for-all for stripped and racing cars, Ward won the club cup by making the hill in 1:513%. In this race A. A. Jones, of Philadelphia, driving a Ford car. lost control after taking the "Hairpin" curve successfully and his car skidded from one side of the narrow roadway to the other, finally throwing the driver out, running over him and then plunging down the bank into the woods. Jones, when picked up, was found to have several ribs broken, an elbow badly injured, while he was cut and bruised all over. The summary:

Event No. 1, for Ford cars exclusively—Won by Claude Kaufman; A. A. Jones, second. Time, 2:131/5.

Event No. 2, for electric cars—Won by F. G. Pecks, Babcock; Henry Noll, Pope-Waverly, second. Time, 3:12.

Event No. 3—Won by E. H. Zimmerman, Jackson; Longstreth, Maxwell, second. Time, 1:55.

Event No. 4—Won by A. A. Maitland, Buick; J. A. Gable, Buick, second. Time, 2:36%.

Event No. 5—Won by C. W. Ward, Matheson. Time, 1:403/5.

Event No. 6, for Franklin owners exclusively—Time, 2:143/5.

Event No. 7—Won by C. P. Brockway. Overland; C. B. Kaufman, Ford, second; E. H. Zimmerman, third. Time, 1:57.

Event No. 8—Won by C. P. Brockway, Overland; F. P. Brand, Imperial, second; J. H. Link, Maxwell, third. Time, 1:55%.

Event No. 9—Won by John A. Gable, Rambler. Time, 2:171/5.

Event No. 10, for motorcycles—Won by Gable, Indian; Archie Wemple, Reliance. second. Time, 2:1336.

Event No. 11, for Maxwell cars exclusively—Time, 2:00.

Event No. 12—Won by Stevens-Duryea. Time, 2:024.

Event No. 13—Won by Imperial. Time, 1:5834.

ANOTHER NEW ROADSTER MODEL

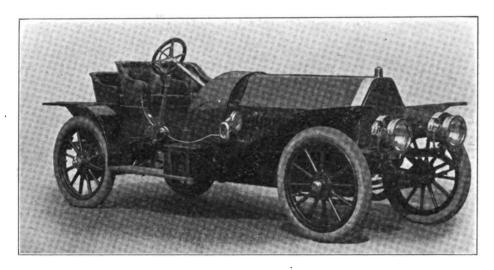
Flexibility of Purpose Shown in Body Design of Jewel 40—Mechanical Specifications of the Car.

Roadster models continue to multiply on the market with a rapidity and constancy which speaks volumes for the faith of the makers in the permanency of the demand for these handy and serviceable vehicles. The most recent development of that sort is the "Jewel 40," which the Forest City Motor Car Co., Massillon, O., has produced by way of rounding out its line. As the accompanying picture shows, it possesses the shaft mounting which also is applied to the steering gear.

The frame is of pressed steel; the spring suspension is semi-elliptic in front and platform in the rear double, internal-external brakes are applied to the rear wheels; and the wheel and tire sizes are 36 by 4 inches. The wheel base is 120 inches, and the total weight is listed at 2,400 pounds. The equipment included is complete down to a full set of lamps, including the headlight and generator installation.

Method to Lessen Headlight Glare.

Among the possibilities in connection with the very desirable dimming of searchlights when running through traffic, one which has not been exploited, so far as is



JEWEL 40 ROADSTER

usual roadster runabout characteristics as far as the placing of the motor, the two principal seats and the mechanism of control are concerned. The rear seat, which accommodates one passenger, is removable, as a matter of course, so that the vehicle may be used without it, or with a double-passenger seat replacing it, thus establishing that flexibility of purpose for which the runabout type of body is most admired.

The mechanical specifications of the car are closely allied to those of "Model G," the touring car made by the same concern. The motor is the four-cylinder Rutenber type, with cylinders of 43/4 by 5 inches bore and stroke, self-contained lubricating system in the crank case, and a six-feed mechanical oiler in addition. Ignition is of the duplicate pattern, with Bosch high-tension magneto and alternative of accumulator cells and coil. The transmission group is composed of a three-speed sliding gearset actuated through a cone clutch fitted with cork inserts, propeller shaft and full floating rear axie. The minimum gear reduction is 21/2 to 1, and the change gear affords three variations of forward drive. The bearings of the transmission, as well as those of the front and rear wheels are of the Tinken roller design—a method of known, is that of shifting the flame out of focus for the time being, or, what amounts to the same thing, shifting the lense or reflector. In lamps which are provided with lenses in front of the flame, the tilting of the lense through a small angle would distort the rays sufficiently to check the projection of the long distance beam, while in lamps not embodying a lense in front, a tilting of the central portion of the reflector might be made to accomplish the same thing. Such an arrangement would entail an alteration in the structure of the lamp.

World's Production of Copper Declines.

Last year for the first time in 15 years the world's production of copper showed a decline, according to statistics issued by a German metal company. The 1907 output. states this authority, was 713,000 tons. Of this amount, the United States contributed no less than 421,400 tons, England following with 72,400 tons, Central and South America with 57,000, and Germany with 31,900 tons. As in the matter of production, the United States led in the estimated consumption with a total of 232,600 tons. Germany, England and France, followed with 149,800, 108,200 and 65,000 tons, respectively.

EXPENSES SWAMP HUGE INCOME

Despite 5,000,000 More Passengers Berlin
Omnibus Company Loses Money—
Upkeep Half Original Cost.

During the year 1907, the General Omnibus Co., of Berlin, the largest undertaking of its kind in Germany, carried no less than 133,800,000 passengers. This represents an an increase of 5,000,000 passengers over the number carried in 1906, or a growth in paying business of 41/2 per cent. To add further to the apparent prosperity of the enterprise, an advance in the total traffic receipts of 10 per cent. was experienced. Notwithstanding this grand showing, however, the year's balance reveals a loss of about \$130,000, after allowing for depreciation. In the director's report this fact is attributed to a growth in general expenses, to which is added a deplorable item for maintenance and improvement of the rolling stock, which, it is said, amounted to nearly 50 per cent. of the original purchase price of the machines. The fact that the company is restricted in the matter of its takings since the rates of fare are subject to the sanction of the police authorities, probably has a good deal to do with the unfortunate trend of the returns.

Little Things with a Reason.

In overhauling a machine, it is extremely difficult not infrequently to "see the reason" for a number of little arrangements of the parts—devices which probably have cost the designer much thought, have been suggested by previous unpleasant experiences, and have been installed by the maker at some slight expense, as preventive and therefore necessary measures. On this account, the owner would do well to beware of stray bits of metal left over after a general clean-up of the power plant.

A case in point is the use of screens and wicking over the bearings in the gear case. Apparently there is no need for them; they tend to impede the flow of oil; they might at some time get adrift in the case and grind up between the gears; they are generally useless, says the amateur mechanic. As a matter of fact, however, they are placed there to strain from the oil as it is thrown over, any stray particles of metal. chipped from the gears, which might score the bearings. A similarly important purpose is served by the check valves which are sometimes placed at the delivery points of the oil feeds to the motor, by the grease cups which are stuck on in places where there is apparently no motion to require the alleviating influence of the lubricant, and by any one of a dozen other little details.

"The A B C of Electricity." Price 50... The Motor World Co., 154 Nassau Street, New York City.

ECONOMY IN CITY REPAIR WORK

Saving Effected by Operating Municipal Plants—What the Street Cleaning Department Has Accomplished.

With the number of automobiles used by the various departments of the municipal government constantly increasing, the city of New York has given considerable thought to the erection of a municipal garage. Though nothing decisive in this matter has been determined, some of the individual departments have taken up the subject of automobile repairing with the idea of cutting down the maintenance cost, a large part of which expense is incurred by having repairs done in regular garage and automobile repair shops.

While some of the city departments are not supplied with stables or buildings in which automobiles may be stored, others have not alone stables, but machine shops as well, and where plants of this kind are maintained in connection with the regular equipment of a department, the upkeep expense of that department's motor cars has very considerably decreased.

One of the departments which has seen the advantages of doing its own repair work is the department of street cleaning. While this branch of the city government long has maintained an elaborate shop equipment for use in repairing the large number of carts and other vehicles which the work requires, the development of an automobile repair shop has been of comparatively recent origin.

It was about three years ago that the use of automobiles in connection with city departments first began. Since that time the number of city owned motor cars greatly has increased until at this date there are about 100 belonging to the city, and of this number the street cleaners have ten. While the official garage of the department is located in an abandoned fire engine house in Mulberry street, the development of the repair shop has been in a building largely devoted to repair work of another nature, i. e., the up-keep of trucks, sprinkling carts and other similar vehicles. In this building, which is located on Seventeenth street and Avenue C, the equipment has been for blacksmiths, wood workers, harness makers and men whose work was in connection with the large fleet of scows and dumpers which the department maintained. As the building contained a power plant, it required but the installation of proper machinery, and the hiring of men to operate it, to establish an automobile repair department. About two years ago there was installed an engine lathe, milling machine, shaper, drill press, and emery wheel. A room of sufficient size to contain several cars was set apart on the mezzanine floor, and an elevator to carry the cars was put in.

A division of this room was made and the machinery installed in the division, which is just large enough to contain the tools and the one car on which the men may be working.

As the civil service laws do not control the appointment of "automobile engineman,"-the official title of the city's chauffeurs-it was possible to appoint any men whom the head of the department wanted for this position; it therefore was comparatively easy for the commissioner to engage the machinist to look after the repairs. A man was appointed, without thought as to his ability as an automobile driver, and another man with the same title and pay-\$1,200 per year—was appointed and directed to act as a helper. These two constituted the regular shop employes, and this force was agumented from time to time by the addition of the chauffeur whose car was undergoing repairs.

When it is considered that the work which is required of the department of street cleaning's motor cars it readily will be seen that the wear and tear on cars whose use is confined almost entirely to city streets, will be very severe. The very nature of the service requires that all kinds and conditions of pavements should be encountered, and as city chauffeurs take advantage of the fact of being municipal employes, the speed laws usually are ignored with the result that the cars are given severe treatment, if not actual abuse.

Because of the demands made on the cars the repair shop always is busy. At least one car is being worked on, and often another, or may be two more, are in the outer room waiting repairs. As soon as a car goes into the shop, whether the shop hands can start at it right away or whether it must wait its "turn," the driver of it at once does the preliminary work of dismantling and cleaning, so that no time will be lost when the actual repair work may be begun. If the repairs are of such a nature as not to require machine work, a broken spring, for instance, or a new spoke in a wheel, the work can be done by the department's regular mechanical branch, irrespective of the automobile repair shop, in which case the chauffeur shows what is needed, and when the new spring or repaired wheel is returned, he reassembles his car and goes out upon his round of duty.

Obviously, an important factor to be considered in the question of the economy of the work, is the efficiency of the repairman. In this respect the street cleaning department is fortunate in having as its master mechanic a man who is entirely competent. To him must a car be taken before the chauffeur can "lay it up." Usually the master mechanic takes an "inspection ride" in a car which is declared out of order, and as a result of the practical demonstration, the amount and nature of the repairs which are to be made is determined on. While some of the men who were employed as shop hands showed incompetency.

they easily were gotten rid of, as, not being civil service appointes, they could not claim civil service protection. The department thus was able to appoint and dismiss its automobile men until finally it obtained those who were conscientious and capable, and because of the efficient force which now is employed the repair shop serves as a means of economy instead of a source of unwarranted expense.

The system as worked out in the street cleaning department has distinct advantages. It reduces the cost of repairs, and it is the means of saving much time. The department is sufficient unto itself, and through its regular mechanical force and automobile repair shop, it can, if necessary, build an entire car and all its parts and accessories, excepting the tires.

That the repair shop is economical is shown by figures recently obtained from the comptroller's books for the year 1907. During this year the street cleaners spent \$2,739 for repairs, while the police department, with fewer cars, paid over \$3,500 to outside shops. While it is not possible to know the mileage of the cars of either department, it is almost certain that the distance traveled by the street cleaning automobiles vastly exceeded that of the other department.

While the municipal automobile repair shop largely was in the nature of an experiment, its two years of existence has justified its continuance, and the results which have been obtained will undoubtedly hasten the ultimate decision of having all the city owned automobiles repaired in a shop or shops owned and paid for by the municipality.

"Long-Arm" Axles of New Type.

Among the useful products of the "Long-Arm" System Co., Cleveland, O., which are being prepared for the builders of 1969 cars, are the new type "B" axle sets, which are designed for cars of 30 to 45 horsepower with maximum loaded weights up to 4,000 pounds. These are in the main similar to the sets produced hitherto and used on several American cars of this year's production, but differ from them in point of minor detail. The front member of the set is of the popular I-beam pattern, equipped with inverted Elliott steering knuckles, and integrally forged spring pads. By the ingenious device of forging these pads of very large size, and subsequently milling them down to specification, it is possible to employ a wide range of spring width and center-to-center distance, and thereby increasing the utility of the model greatly. Two types of rear axle are built, one of the ful! floating type, with bevel differential gears and cast steel housings, and the other of the semi-floating type, with large Hyatt roller bearings for the outer support, but otherwise similar to the full-floating axle The other bearings, like those of the standard set have either cone or annular races. fitted with special alloy balls.

BRAND NEW IDEA IN A CLUTCH'S

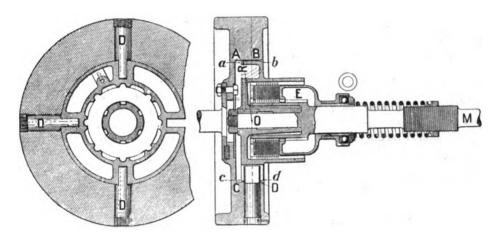
Novel Combination of the Multiple Disc with a Cardan Mounting—The Advantages of Each Retained.

Absolute flexibility in the connections between the essential elements of the power plant requires the use of a considerable number of universal or cardan joints in the mechanism of the well-designed car. In the case of the connection between the master clutch and the gearset, or between the motor and the clutch, this requirement frequently involves some little mechanical complication which might be avoided profitably were it possible to dispense with the

the spherical exterior of the clutch body, while the driving relation will remain undisturbed.

In order to transmit the driving torque from one element of the clutch to the other, four driving pins or tenons are employed, as at D-D-D, which are seated in as many holes placed at right angles to one another in the body of the fly wheel, and are fitted in guide slots, c-d, in the exterior of the clutch body. A veritable universal joint is thus formed. Within the casing so mounted the usual floating and stationary discs of the clutch are placed.

The clutch shaft is connected to the driving shaft of the transmision by means of a threaded sleeve, which is retained in place by a spring locking pin. By backing this off a few turns and releasing the eight bolts



provision for universal movement or were it possible to condense the clutch and universal joint into a single organ. This latter improvement over the ordinary arrangement is embodied in at least one clutch of the plain cone type, and of American manufacture. An entirely novel application of the same principle is, however, found for the first time. so far as is known, in the Cottin & Desgouttes clutch, which has lately been introduced into the French chassis of that name.

It is, so to speak, a combination of the multiple disc clutch with a cardan mounting, the result being the retention of all the advantages of the former with the extreme flexibility and freedom from cramping tendencies of the latter. This provision is, of course, especially desirable in a clutch in which, with the small clearance of the type, the slightest tendency to disalignment may cause binding with consequent inability to disengage completely.

From the accompanying illustration the general arrangement of the device will be seen. Made solid with the fly wheel is a cylindrical recess concentric with the axis O-M of the clutch, and having the radius O-R. Within is mounted the spherical clutch body, a-b, of the same diameter as the cylinder and compelled to turn with it. Obviously, any alteration of the alignment between the two will be accommodated by

which retain the flange coupling of the crank shaft on the face of the fly wheel the entire shaft and clutch may be withdrawn as a unit. The complete operation of dismounting the clutch and remove it from the chassis may be performed in less than two minutes, it is claimed.

To Prevent Trouble from Drippings.

There can be no question of the necessity of providing thorough and effective means of draining the under pans of all chassis in order to prevent the accumulation of inflammable vapors and their liquids. But in addition to this care should be taken to have the exhaust piping so arranged that in the event of a leaky gasket or a broken muffler casing there will be no danger of a discharge of sparks into the enclosure beneath the mechanism. In this connection care should be taken to see that the muffler cutout is not so placed as to permit any discharge under the car body. As for the carburetter, in order to prevent trouble from drippings of fuel, it is well to provide either for drainage entirely external to the pan, or else into a separate compartment independently drained. The oldfashioned canvas under-boot is never to be encouraged. It is but a make-shift at best, but when oil-soaked, it becomes a positive menace to safety.

MAY REVOLUTIONIZE INSULATING

German Substitute for Celluloid that Displays Remarkable Qualities and Appears of Far Reaching Promise.

Great commercial possibilities are thought to be held forth by a new substance, known as Cellit, which is announced as an incombustible material closely related in its properties to celluloid, but differing from it in that one material respect. It is a recent German invention, the origin of which is credited to a Dr. A. Eichengrun. If present hopes in it are realized, it may come to supplant the celluloid of commerce in nearly all of its practical applications, and also to have a much wider range of application, as in replacing rubber for the insulation of electric wires, as a transparent varnish for coating leather and woven fabrics, and in numerous other uses.

Although many attempts have been made to produce such a substance, none have been successful up to this time. A discovery of some ten years ago, for instance, acetyl-cellulose, as it was called, proved to be too soft to be useful. A later discovery, tri-acetyl-cellulose, which was made directly from cotton-wool, could not be employed, because it proved to be soluble only in chloroform, which is so injurious to the human system when handled extensively as to preclude the application of that particular compound in any practical way. The new acetyl-cellulose, however, differs from its predecessors in several respects, and among them in its property of solubility in camphor, acetic ether and other harmless solvents.

In a recent demonstration before the Dusseldorf Scientific Society, the inventor exhibited a wide variety of samples of cellit products. All such variations are perfectly transparent, unaffected by water, and not brittle. Some varieties cannot be ignited at all, while others burn but slowly. Some were hard, like celluloid, others soft like leather, and still others elastic like rubber. Samples were exhibited of papers and fabrics coated with the new substance employed as a sort of waterproof enamel, others of imitation "patent leather," and oil cloth in which the pattern was woven in the fabric, but transparent through the cellit coating. Most remarkable of all, however. was the successful use of cellit in insulating electric wires.

Speaking of the discovery, the Scientific American remarks: "In cellit, therefore, we have a new material which combines the good qualities of glass, gelatine, celluloid, leather and India rubber, and which may advantageously be substituted for these materials for many purposes. But cellit will also find entirely novel and peculiar fields of usefulness, as it at once is as transparent as glass and as flexible as cloth."

None Perfect in Washington Run.

With excellent roads and perfect weather conditions, 13 of 16 starters finished the endurance contest promoted by a Washington (D. C.) newspaper on Tuesday, 9th inst. The distance was 164 miles, and the course took the contestants through the States of Maryland, Virginia and West Virginia. While no perfect scores were made, two drivers, Luttrell (Buick), and Miller (Ford), were tied with only 2 points penalization each, in the light roadster class; strangely enough each of the two drivers was penalized for the same cause-stalled motors. In the roadster class Shaab (Stearns), also lost but 2 points, but because of his muffler becoming loose, the car had no running troubles and the defect was found only when the examintion took place in the garage after the run had been completed. H. Gill (Thomas-Detroit), went through with what he thought was a perfect score, but lost 15 points when it was found that a front axle was bent.

With the exception of the cars mentioned all had to break seals and do little odd jobs or one sort or another. Thomas (Pullman), lost 42 points through the necessity of tampering with his ignition system, and Zell (Thomas), was bothered by his left chain slipping off. Bliven (Franklin), had hard luck in breaking a steering knuckle, but came in with a man on the running board guiding the car. Jose (Cadillac) had to

break a seal because his gasolene pipe got stopped up; he was penalized, too, for taking on water and for a brake that worked loose. Shuler (Mitchell) was fined 80 points for being late at controls, 56 points for road repairs and 52 points for a bad brake. Lutz (Oldsmobile), suffered principally because of punctures—he had 9—his brake cost 35 points, and at inspection he lost 3 more. Jacobi (Columbia), ripped out all his lower gears, but arrived finally by driving on high. Padgett (Maxwell) lost points because of his brake, which became loose and did not work well. Lost time was responsible for most of Matson's (Corbin) penalization. The score:

Light roadsters—Luttrell, Buick, penalization, 2 points; Miller, Ford, 2; Padgett, Maxwell, 51.

Roadsters—Shaab, Stearns, 2; Matson, Corbin, 40: Thomas, Pullman, 42; Zell, Thomas, 117.

Touring cars—Gill, Thomas, 15; Jose, Cadillac, 141; Bliven, Franklin, 188; Shuler, Mitchell, 188; Lutz (pilot), Oldsmobile. 338; Jacobi, Columbia, 1,058.

Card for Second Point Breeze Meet.

Eight events constitute the program for the second annual race meet of the Quaker City Motor Club, to be held at Point Breeze track on Saturday, June 13. The distances range from one mile to 50 miles, the long distance race being a fre-for-all.

From Broncho Busting to Motor Racing.

From broncho busting to automobile racing will be the range of entertainment with which Douglas City, Arizona, will regale itself on the Fourth of July. The last named feature will be a novelty there, and it is planned to make it a successful one. It will consist of a 40 miles road race, and the course will include some of the streets in the city as well as roads in the immediate vicinity.

Elks to Hold Automobile Meet.

Automobile races will constitute one of the big features in a festival which the Washington Lodge of Elks, No. 15, of Washington, D. C., will hold at the Bennings race course, June 16, 17 and 18. The meet will be under the sanction of the A. A. A., and is scheduled for the afternoon of the 18th. There are five events on the card, one being for cars to be driven only by Elks.

Beach Racing for Cape May's "Fourth."

The motor car is to dominate the day in the Fourth of July celebration at Cape May. N. J., this year, although Wheelock's Indian band of 40 pieces, composed entirely of American Aborigines, will assist in the holiday making. Races will be held on the beach front boulevard, and on the strand, under the auspices of the Quaker City Automobile Club of Philadelphia.

The Man Ahead



knows by the sound of a Gabriel Exhaust Horn that a high grade car is coming. They clear the road and give "class" to the car.

Easily attached, always ready, nothing to wear out, worth more than the price in satisfaction.

The Gabriel Cut-Out Valve relieves back pressure of engine and assists in speeding, hill climbing and on heavy roads.



Write for prices.

Gabriel Horn Mfg. Co.

1417 East 40th Street CLEVELAND, OHIO

We Are In



on the difficult gear cutting jobs, as well as the easy ones. Our facilities and experience enable us to deliver promptly, in any quantity, accurately cut gears of any kind and material. Both formed cutter and generated tooth methods used as best suited. Special hobbing machines; up-to-date hardening facilities.

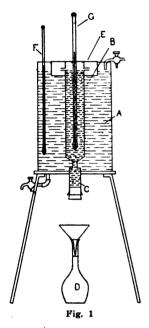
The "Long-Arm" System Co.

Sales Dept., AMERICAN DISTRIBUTING COMPANY, Cleveland, Ohio

HOW LUBRICANTS ARE TESTED

Simple Apparatus for Determining Their Quality—One Test the Owner can Make for Himself.

Probably the average motorist is more interested in knowing how well a certain brand of lubricating oil is likely to work in his motor than he is in learning its chemical composition or what steps are involved in its manufacture. Indeed, the chemistry of lubricants is commonly considered to be so extremely technical and involved in every respect that it is somewhat surprising to learn that the processes



applied in oil testing are, as a rule, comparatively simple and easy to understand. Furthermore, a casual summary of these methods of test reveals something of the amount of care which must be observed in the production of an oil possessing just those qualities which are required for it.

Without enumerating in detail the "specifications" which are required in a perfectly suitable gas engine oil, it is sufficient to indicate that four different properties must be taken into account, though these may be divided into a greater number when more intimately examined. For general purposes, however, those qualities which are of the greatest significance in an oil for use in the internal combustion motor are: the body, or practically speaking, the resistance which it offers to being squeezed out from between the bearing and its journal; its density or specific gravity; its resistance to the effect of heat in thinning, or changing its body, gumming, vaporizing and carbonizing, and the temperatures at which these effects may be supposed to take place; and its corrosive action on metal with which it may be in contact.

The technical equivalent for the quality

noted as body, is viscosity. What is known as viscosity of an oil is merely an arbitrary statement of its degree of fluidity. Actually, it is the number of seconds required for a known quantity of the oil to flow through an orifice of a certain diameter, when the oil is maintained at a stated temperature. Because viscosity varies at different temperatures; and because some oils thin out more rapidly than others when subjected to heat, viscosity alone cannot be taken as the true measure of value in the lubricant. In conjunction with other tests, however, it is considered of great importance.

A standard type of viscosimeter is shown in Fig. 1, which is of extremely simple pattern. The outer container, A, serves as a water bath, in which is mounted a cylindrical tube or pipette, B, the lower end of which is closed by a cork, C, while the upper portion is passed through the base of a small overflow font, E. Beneath the device is a flask or graduate glass of known capacity, into which the oil is allowed to flow. Means for supplying water of any required temperature, and a couple of thermometers, complete the apparatus.

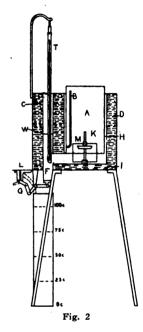
When making a test, oil is put into the pipette until it overflows into the font at the top. Warm water is then supplied to the bath by means of the tap above, while the bottom tap is opened sufficiently to regulate the water level properly and yet provide a constant circulation. The temperature of the bath is brought up to 70 degrees Fahr., as noted by the thermometer, F, and is held there until thermometer, C, also registers 70 degrees, indicating that both oil and water are at exactly the same temperature. At this point a syringe is inserted in the overflow font. E. and sufficient oil removed to bring the level down to the top of the overflow in the pipette. This ensures the presence of an exact quantity of oil in the pipette at that temperature, and the withdrawal of a certain amount when the proper temperature is reached, is made necessary by a very slight increase in volume of the oil while heating.

When all is ready, the operator grasps a stop watch in one hand, and with the other removes the stopper, C. The oil is permitted to run down into the flask at the bottom until the level in the pipette comes to a mark near the bottom, when the stopper is quickly replaced and the time taken at the same instant. In the ordinary form of viscosimeter, 60 cubic centimeters are permitted to flow in this way, leaving 8 of the original 68 cubic centimeters in the glass. It is necessary to leave a small amount of oil in the pipette in order to prevent the flow from being retarded by sticking to the sides, this effect being different with oils of different bodies. The number of seconds required for the 60 cubic centimeters to flow under the conditions named, is called the viscosity of the oil.

As the rate of flow through the lower orifice must vary with the amount of oil in the pipette, a somewhat more complicated

apparatus is sometimes employed for making very accurate determinations. This is shown in Fig. 2, and is so constructed that during the entire time the specified quantity of oil is flowing a constant level or "head" is maintained over the orifice.

The principle and method of operation in this case is the same as in the first type mentioned. A is the font or oil well, in which the main supply is placed, and which is in the form of an inverted cup or container, closed at the bottom with a valve, K, supported by the frame, M, so that no oil is permitted to flow from it as it is placed in the apparatus in the position shown. As soon as it is in place, however, oil flows out through the opening of the valve, K, by



the pressure of the bottom of the chamber in which the cup rests on the valve stem. Four little tubes, one of which is shown at B, are so arranged in the cup as to permit air to enter until a certain stated level is reached. At that point the rising level in the chamber in which the cup is contained, forms a seal which cuts off the air supply to the tubes, thus preventing any more oil from flowing until the level in the chamber is withdrawn.

The jacket D-C, is arranged much as in the first instance, and is designed to keep the oil at the required temperature. The thermometer, T, is suspended in the well, W, where the bulb is immersed in the oil. The stopper, F, is in the form of a valve, held by a couple of links and the spring catch, L, in such a way that upon releasing the latter the valve drops entirely out of the way, permitting the oil to flow into the receiving glass below. When the desired amount has run out the handle G is raised, shutting the valve.

Closely allied to the viscosity is the density of the oil, which is obtained by the use of a hydrometer similar to those sometimes employed in testing the specific gravity of gasolene. The readings of specific

gravity and viscosity are the most significant tests made upon the oil. Together, they closely define its properties to the oil expert.

The effects of heat are obtained by several tests which give the "flash point" or temperature at which the oil vapor will be ignited by an open flame held a half inch above its surface; the fire test, denoting the temperature at which the oil itself takes fire; and the tendency to gum, by a test in which several streams of oils of different sorts are permitted to flow over an inclined plate heated to a stated temperature. The difference in time taken by the various samples when started at the same instant, measures the thickening or drying effect of the heat, coupled with the effect of the air.

The effect of the oil upon metal by corroding it is shown in various ways, but perhaps most effectually by a test which is within the reach of any one who has the curiosity to try it. It is merely necessary to wrap a few coarse threads taken from cotton waste, about a piece of brightly polished steel, saturating the cotton thoroughly with the oil to be tested, and then to place the sample in the sunlight in a fairly warm place. If the oil contains acids, it will tend to etch into the steel. In bad cases the effect will be noticeable within a few hours. Suitable oil or grease will show not the slightest dulling effect on the polish even after several weeks or even months of such exposure.

This test is quite an important one, because an oil containing acids will soon roughen the journals it is intended to lubricate, and will have an even worse effect upon the cylinder, under the action of the high heat. On this account it is well for the owner who is about to try a new and unknown brand of oil to make this test for himself, since it is costless, and requires no time or special apparatus. If no etching effect is shown, he may be sure that the oil is not injurious to the bearings, however well or ill it may behave in the cylinder, in respect to its lubricating and carbonizing properties. If it dulls the surface on which it is tried, within a reasonable length of time, it is not suitable for any purpose, regardless of its appearance in other respects.

When Lubrication by Hand is Advisable.

When overhauling the machine, there is danger of omitting to oil bearings which have just been cleaned with gasolene or kerosene. Because it requires an appreciable length of time for the oil to reach all bearings through the regular channels from the lubricator, there is more than a bare chance that a tightly adjusted bearing may suffer considerably when the machine is first started. On this account, as well as owing to the fact that there also is some liability on the part of the repairman to forget to adjust the oiler after an overhauling, it is very important that all bearings be oiled by hand during the process of assemblage.

NEW PROCESS FOR RUST-PROOFING

"Cosletting" a Method of Effecting Chemical Change in the Metal's Surface—
Applicable to Many Uses.

Although numerous processes have been invented for rust-proofing metal, all those which have been put to the practical test possess certain drawbacks, either in the shape of unsuccessful results under certain circumstances, or else in the way of prohibitive cost from the standpoint of general all round utility. These methods range from the use of mere paints of various sorts to systems of coating with non-corrosive metals. A recently developed English process however, differs from either of these classes, in that it effects a chemical change in the surface of the metal itself, much as the outer layer is affected by the case-hardening process. It is known as the Coslettising process, and is the invention of T. W. Coslett, of Birmingham.

A lecturer before the Bírmingham University Metallurgical Society recently described the process as consisting "in immersing the article in a hot phosphorized solution together with an iron compound. The surface of the iron is converted into a mixture of ferrous and ferric phosphates, and presents a pleasing dull-black appearance. This process makes the iron highly resistant to corrosion, and is being applied to all kinds of light engineering work, such as cycle frames, gun-barrels, stampings, and press work."

"The invention is of both scientific and commercial importance, since it establishes the fact that under certain conditions iron will absorb phosphorus just as it absorbs carbon in the cementation process," comments the Autocar in reference to it. "The phosprorus, however, does not enter into the structure of the metal, but only penetrates the surface to a fractional degree, yet sufficiently to render it immune from rusting influence. The inventor has clearly established this fact by the action of the process upon steel springs of the most delicate description, which when treated retain their resilient and other essential properties. That it is not a mere coating is proved by the effect of the process upon the threads of fine screws, which run just as freely after treatment as before. The accuracy even of the micrometer gauge is not impaired in any way by the Coslettising process. These and other similar experiments will substantiate Mr. Coslett's claim that phosphorus, which under other conditions has so deleterious an effect on the stability of iron and steel, yet is absolutely harmless when incorporated under proper control.

"The articles intended for treatment are immersed in a chemical bath for three or four hours, which is maintained at boiling point. They are then withdrawn and placed in a stove or other drying apparatus for a few minutes at a temperature of 212 degrees Fahr. They are then oiled, and the process is complete. The cost of the solution is less than a farthing (½ cent) per gallon, and the utensils employed are of the crudest description.

"It will be seen that the process is extremely simple to manipulate, all that is required being an enamelled iron or cast iron vat for containing the solution which is kept at boiling point by means of a Bunsen burner or other source of heat. When the solution is boiling the metals intended for treatment are immersed, and after a lapse of three of four hours are withdrawn, dried, and oiled. This completes the whole process."

Already one firm of English motor car makers is contemplating the adoption of the process under license from the patentee. It is planned to apply it to such exposed parts as are sometimes plated and sometimes merely polished, and also to panels and wings, which now are either leaded or tinned. This will prevent rusting and also, it is hoped, help to develop a higher finish. A project is even entertained of treating tire rims in this way to prevent them from rusting when more or less scarred from successive tire changes. The possibility of applying the system successfully in this connection remains to be demonstrated, however, as the upper limit of temperature which metal is processed will stand after treatment, has not been determined. According to one investigator it will stand a dull red heat and not lose The black tone disappears as the surface oil burns off, to be sure, but on being wiped over with oil again it burns black and sets black, he maintaines.

Special Spark Plug for the Magneto.

Because of the relatively great current strength of the energy delivered in the spark from a high tension magneto it has been found that improved running conditions may be obtained by the use of a special form of spark plug instead of the standard type commonly used with the battery and coil system. To fulfil the demand which is thus created a new "Soot-Proof" plug has been developed by C. A. Mezger, Inc., New York, which affords the required reinforcement in the matter of insulation and also has four sparking points, instead of the one employed in the regular "Soot-Proof" plug. These points are stamped from a single piece which is spun into the base of the shell of the plug, and are spaced 1-32 of an inch away from the central electrode. The insulator, which is of strong, hand turned porcelain, has a squared internal socket into which the rectagular shoulder of the electrode fits. As a result of this arrangement there is no danger of loosening the spindle when adjusting the terminal connection. The body of insulation is unusually large, and special provision is made for sealing all joints gas-tight.



BROADER SHARING OF ROAD MONEY

Jersey's Automobile Income to be More Generally Distributed—All Improved Roads to be Benefited.

An important and far reaching change in the distribution of revenue derived from the taxation of automobiles in New Jersey will result from the operation of the Frelinghuvsen law as amended at the last session of the legislature. State Road Commissioner Frederick Gilkyson has received from Attorney-General McCarter an opinion which holds that under the amendments the income derived from motor vehicles must be divided among the various municipalities of the State in proportion to the mileage of improved roads in each. In the past the revenues from this source have been apportioned only on the basis of roads in which the State shared the burden of construction.

The attorney-general holds that it was the evident intention of the last legislature to distribute the funds for the repair of all improved roads of a certain character, regardless of who paid the original cost.

"My construction of Section 37, of Chapter 304, of the laws of 1908," says the attorney-general, "is that the funds you receive from the State treasurer are to be appropriated by you for the repair of all improved roads of the character designated in the act, whether improved by the counties, towns, townships, boroughs, villages or other municipalities. The design of the act seems to have been to apply the funds to the repair of all improved roads, whether they have received State aid or not, and of course roads that have been improved by municipalities other than the counties are quite as apt to be used by motor vehicles and to need repairs as roads in the counties that have been improved by the counties themselves."

The amendment of 1908 will cause quite a shake-up in the distribution of the money turned into the State by automobilists. Heretofore the lion's share went to the counties which had invoked the greatest amount of State aid in building their roads. Burlington County, for example, received as its share nearly \$9,000, while Union and Hudson, whose roads were built without State aid, received lass than \$200 apiece.

According to the last report of the road commissioner, there are in the State 1,231 miles of roads built under the State aid law. Toward the construction of these the State has contributed \$2,283,007. Improved roads built in the counties without State aid aggregate 800 miles. In order to determine the amount to which each municipality will be entitled, it will be necessary to obtain reports from about 473 municipalities in the State showing the total milage of improved roads in each. It is estimated that the re-

ceipts this year from the motor Vehicle department will be about \$82,000, or nearly \$26,000 more than last year.

Under the new method of distribution Burlington, Mercer, Middlesex, Monmouth and other counties which have invoked the State aid law most freely will be the losers, while those counties which have built their own macadam roads will be the proportionate gainers. Improved roads under the motor vehicle act do not include streets paved with cobble stones, Belgium block or asphalt.

The distribution of the automobile fund in 1907 was as follows: Atlantic, \$3,896.43; Burlington, \$8,850.75; Camden, \$3,724.60; Cape May, \$1.158.66; Cumberland, \$62.96; Essex, \$4,598.27; Gloucester, \$3,864.70; Hudson, \$125.91; Mercer, \$5,987.02; Middlesex, \$6,015.14; Monmouth, \$4,345.89; Morris, \$3.122.15; Ocean, \$1,695.63; Passaic, \$2,540.71; Salem, \$1,146.95; Somerset, \$3,104.61; Sussex, \$341.50; Union, \$176.98; Warren, \$1,719.98.

Road Destruction by Two-Wheeled Carts.

Motorists who venture into Mexico and find the roads beyond power of description have discovered an offending cause in the ever present two wheeled cart. The wear which these vehicles bring upon the road is said to be far in excess of that occasioned by any other element of traffic. When one of the wheels strikes an obstacle, it pauses momentarily, while the other swings part way around it, incidentally scraping away a section of the road surface. A similar effect results with the first wheel as soon as the obstruction has been surmounted. In this way the heavy wagons leave a zig-zag trail of dismantled road behind them. In addition to this, the wear and tear on the draft animals occasioned by these side swayings, will, it is thought, ultimately lead to the suppression of these relics of antiquity. Until such time, however, it is thought that well preserved roads will remain an impossibility.

Salvage Corps to Have Motor Wagon.

After thoroughly studying the use of automobiles as applied to the service of salvage corps, the Underwriters Protective Association of Newark, N. J. have appropriated \$6,000 for the purchase of an automobile salvage corps wagon. Basing their calculations on the time made by the machines now in use in other cities, the Newark underwriters figure that a motor car can cover a certain distance in four minutes which takes eleven minutes to travel with the horse drawn vehicle.

Memorial for an Early Motor Builder.

A memorial tablet has been placed on the house in Malchin, Mecklenburg, Germany, in which Siegfried Marcus was born. To Marcus is given the credit of building the first gasolene motor car constructed in Europe. The car was built in 1875 and now is in the possession of the Austrian Automobile Club.

HITTING IT RIGHT BY CHANCE

One of Many Incidents Illustrating the Haphazard Methods of Some Drivers
—Sometimes They are Lucky.

It has been advised frequently that the use of non-skid shoes on opposite "corners" of the car tended to unsatisfactory and abnormal running conditions. This is because the difference in diameter of the nonskid and non-skidless wheels, causes the differential to work continually and also interferes with the steering more or less. The old theory that a car was less liable to skid when so equipped than when both nonskids were on the rear wheels is no longer advocated by well posted drivers. But nometimes there are other reasons for following the practice, as was evidenced by a conversation which recently was overheard.

A bystander inquired of the driver of a car which had just drawn up to the curb, why he carried steel shod tires on opposite sides, front and back; the driver replied that "it just happened so."

"But don't you think it keeps you from skidding that way?" continued his questioner.

"No, I don't know that it does."
"Then why——"

"Oh, it just happened there were 'sand holes' in those two tires, that's all. I never thought about the differential business, but it was easier putting the non-skid in front than changing over the front tire to the back and then putting it on, and I couldn't see that it made any great difference either way."

How Motorists Generally Obey the Law.

In view of the probable passage of a great many motor vehicles through Shrewsbury, Mass., on Saturday, 6th inst., the day of the hill climb at Dead Horse hill, the selectmen of the town placed two constables on the main road between Shrewsbury and Worcester to enforce the speed law. According to the report of one of these officers only a few of the 1,000 or more motor vehicles that passed him were traveling very fast, and he warned but one operator. One vehicle, however, bearing the number "C 201 M" traveled, as he estimated it, a quarter of a mile in 17 seconds.

Bermuda Excludes all Automobiles.

Bermuda has barred automobiles by legislative enactment which has received the approval of the governor of the province. The probability of such action being taken was stated in the Motor World early in the year when agitation against automobiles was begun by residents and visitors. The new law revokes the permission to run motor vehicles which had been granted by a previous law.







The Proof of the **Pudding** is in the Eating

COMMON SENSE PLUC. PRICE \$1.25

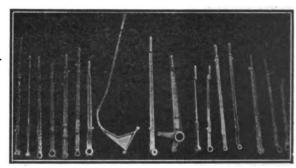
It is very easy for you to prove whether the claims for excellence of SPLITDORF IGNITION APPARATUS are real or whether they are mere talk.

Just give it a fair trial on your car-that's all.

You will soon discover an absence of ignition troubles and a reliability and efficiency that will make you its friend.

C. F. SPLITDORF, Walton Ave. 4 138th St., NEW YORK

PARSONS' MANGANESE BRONZE LEVER CASTINGS



THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, Philadelphia, Penna.

SIDE-WIRE SOLID MOTOR TIRES THE WORLD'S STANDARD FIRESTONE TIRE & RUBBER CO., Akren, Ohio

MORGAN & WRIGHT TIRES ARE GOOD TIRES



STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Workmanship is superior. Materials cost-lier. Design more attractive. Flexible shaft stronger. Stewart Model \$40. Guaranteed Absolutely for Five Years. STEWART & CLARK MFG. CO., 509 Diversey Boulevard, Chicago, U. S. A.

THOMAS THE

America's Champion in the New York-Paris Race

Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.



THE IS RIGHT \mathbf{E}

Built to outwear an auto, and it will Send for Booklet

x Speed Indicator Co. MINNEAPOLIS, MINN.

COMPLETE COURSE AUTOMOBILE INSTRUCTION

Invaluable to the owner or prospective owner of a motor car. Practical and to the point. Send for prospectus to the

Correspondence School of Motor Car Practice Tarrytown, N. Y.

McCORD LUBRICATORS — RADIATORS

"Marks of a Good Meter Car"

McKIM COPPER-ASBESTOS CASKETS

McCORD & COMPANY

NEW YORK-Hudson Terminal, 50 Church Street. Old Colony Building, CHICAGO.

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

SINGLE CYLINDER CADILLAC

showing actual cost of maintaining their cars. It also contains much advice of value to the automobile buyer. Ask for free copy of Booklet No. 6.

CADILLAC MOTOR CAR COMPANY, Do Detroit, Mich.

The Week's Patents.

883,552. Clutch Mechanism. Carlton R. Mabley and Gustave E. Franquist, New York, N. Y.; said Franquist assignor to Smith & Mabley, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 9, 1904. Serial No. 188,327.

1. In an automobile, the combination of a driving gear and a shaft comprised in part by a clutch member, a sleeve supporting said clutch member, a hollow shaft on which said sleeve is adapted to slide longitudinally, a spring device contained within the said hollow shaft for moving the clutch member in one direction, the said hollow shaft being connected at each end to other sections of shafting and in alignment therewith, the said hollod shaft and its supported parts beinb removably secured by such connections in such manner that the said hollow shaft and its supported parts may be uncoupled and removed from the machine without disturbing the alignment of the remaining portions of the shaft.

833,554. Sparking Device. Henri Maillard, Paris, France. Original application filed Jan. 30, 1905, Serial No. 243,371. Divided and this application filed Oct. 24, 1906. Serial 340,422.

1. In an electromagnetic sparking device, a two part iron core one of said parts beinging in yielding engagement with the other, said movable part supporting a rod of non-oxidizable metal centrally reinforced with a rod of heat refractory metal, said second rod having a tip of non-oxidizable metal, a second terminal, and a support for the same out of metallic contact with said core.

883,572. Pneumatic Tire Shield. Frederic W. Savage, Granville, N. Y. Filed Nov. 10, 1905. Serial No. 286,731.

1. A removable shield for pneumatic tires, composed of interjoined links formed of round wire and sufficiently twisted to form a substantially unbroken and comparatively flat surface, adapted to cover the tire.

883,582. Device for Automatically Controlling Lamps on Vehicles. John W. P. Smithwick, La Grange, N. C. Filed March 22, 1907. Serial No. 363,792.

1. The combination with a vehicle frame, a front axle, stub spindles pivoted to the ends of the axle, wheels on the spindles, rearwardly extending arms on the spindles, a rod connecting the arms, and means for manually controlling the pivotal movement of the spindles, of brackets secured to the frame in front of the axle and each having an upright member provided with a vertical opening, bifurcated standards mounted to turn in the openings of the brackets, lamps pivoted on horizontal pivots between the members of the standards, downwardly curved arms rigidly secured to the lower ends of said standards, a rod connecting the arms of the standards, said rod comprising two sections pivoted at one end to the arms and having their other ends screw threaded ends of the rods, adjustable boxes, one on the said rod and the other on an arm of one of the spindles, and a rod extending diagonally across the axle and having its ends pivoted to the said boxes.

883,658. Friction Clutch. Henry Lutz, Denver, Colo. Filed Jan. 23, 1907. Serial No. 353,643.

1. The combination of a driving shaft, a clutch wheel mounted to rotate therewith and provided with open ended casings, plungers slidable in said casings and provided at their outer extremities with fric-

tion faces, a sleeve slidable on the shaft, the said levers having approximately the shape of bell cranks, one arm of each bell crank engaging the sleeve, while the other arm is provided with a weight, substantially as described.

883,710. Mud Wing for Motor Vehicles. George Frentzen, Aix-la-Chatpelle, Germany. Filed Jan. 16, 1906. Serial No. 296,-401

1. A mud wing for motor vehicles consisting of a rigid body substantially inclosing with its longitudinally curved part the rearward upper quadrant of a front-wheel of a motor vehicle, and transversely bent to terminate in an integral member for securing said mud wing to the vehicle body and to admit of said front wheel taking up any desirable angular positions within said body.

883,732. Friction Clutch. Van Zandt M. Moore, Cleveland, Ohio. Filed Jan. 15, 1906. Serial No. 296,017.

1. In a friction clutch, the combination of a pair of members having conical surfaces inclining in opposite directions, said members being rotatable together but movable toward and from each other, a spring tending to thrust said members into clutched position, a third member having two conical surfaces one of which encircles the other, rotatable together and adapted to be engaged by the respective members of the pair under the influence of the spring and mechanism for moving the members of the pair in opposition to the spring to release the third member.

883,735. Driving Mechanism for Motor Carriages. Alfred B. Morse, South Easton, Mass. Filed Sept. 26, 1903. Serial No. 174,782.

1. Driving mechanism for a motor vehicle, comprising an axle, a power transmitter mounted thereon, two gears carried by said axle for operating said transmitter, and balance levers pivoted on the plungers, and clutching mechanism including two actuating means, located at the opposite sides of said transmitter and connected together at the axle for coupling one or the other of said gears and said transmitter as desired and a single operating device for said two connected actuating means.

883,740. Spray Carburetter. Peter A. Poppe, Coventry, England. Filed Jan. 15, 1907. Serial No. 352,358.

1. In combination, a jet nozzle, means for maintaining the fuel at a suitable height therein, a mixing chamber having an inlet thereto and an outlet therefrom, a rotatable plug cock arranged in said chamber and adapted to control said inlet and said outlet, a jet nozzle controlling device connected thereto, and an adjustable cylinder arranged around said plug cock with holes in said cylinder corresponding with said inlet and to said outlet of the mixing chamber, substantially as set forth.

883,763. Tire for Vehicle Wheels. James E. Tourtellotte, Hartford, Conn. Filed May 28, 1906. Serial No. 318,997.

1. A tire composed of elastic material

"REMY MAGNETO"

Means absolute reliability
of the ignition system.
Investigate for your 1908 car.
REMY ELECTRIC CO., Anderson, Ind.

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

FOR SALE—6 cylinder Chadwick, duplicate of winner of Wilkes-Barre hill climb; machine is perfectly new; will sell for best offer. BOWMAN AUTO COMPANY, 225 West 49th St., New York.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to sée how much I can save vou on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

New and Absolutely Fireproof.

HOTEL TULLER Adams Ave. & Park St. DETROIT, MICH.



AUTOMOBILE HEADQUARTERS

In center of Theatre, Shopping and Business dictrict. Club Breakfast, 40c. up. A la Carte Cafe, Grill Rooms. Every room with bath. Rates \$1.50 per day up.

L. W. TULLER, Prop.

M. A. SHAW, Mgr.

FRANKLIN Automobiles

Franklin light-weight construction is stronger than ordinary heavy construction—and does a lot more. Write for catalogue.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.



How Are Your Batteries? A CONNECTICUT VOLT AMMETER WILL TELL YOU

Guaranteed, and the price is right, send for catalogue and trade discounts.

CONNECTICUT
TELEPHONE and ELECTRIC CO., Inc.
Meriden, Conn.

and having sloping sides gradually tapering from the inner edge to a dimension of less width nearer the outer edge of the wheel, a reinforcing strip composed of practically unyielding material and having side parts conforming to and embracing the sides of said tire, the entire inner surface of said reinforcing strip being vulcanized to the tire, and means for securing said reinforcing strip to the rim of a wheel.

883,774. Power Transmission Device for Motor Vehicles. Frederick C. Avery, Harvey, Ill. Filed March 9, 1904. Serial No. 197,289.

1. In a power transmission device, a frictwo wheels in friction contact with said disc and rotating in opposite di-rections, two shafts driven by said wheels, a gear attached to each of said shafts, two driven shafts, two driven gears mounted thereon, two swinging hangers mounted concentric with the two first mentioned shafts, said hangers supporting the driven shafts, two swinging brackets, a single intermediate gear attached to one bracket, two intermediate gears attached to the other bracket, and said brackets arranged to swing in order to move the intermediate gears in and out of contact with the driven gears as herein shown and described.

Brake and Clutch Operating Mechanism for Automobiles. Charles Schmidt, Cleveland, Ohio, assignor to the Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia, Filed March 29, 1906. Serial No. 308,759.

1. In an automobile, the combination of the two rear wheels having cylindrical braking surfaces and brakes, which engage with the braking surfaces on said rear wheels and are provided with operating levers, with an equalizing bar, supports secured to the automobile frame for sustaining said equalizing bar and permitting it to move forward and backward, links connecting the brake operating levrs with said equalizing bar, a draft device connected with said equalizing bar, and mechanism for operating said draft device.

Speed Changing Mechanism. 883,870. Walter O. Foss, Philadelphia, Pa., assignor to Direct Motor Drive Mfg. Co., Philadelphia, Pa. Filed Dec. 5, 1907. Serial No. 405,188.

1. In combination, a power shaft, a driving disc, a pinion, an annular member mounted upon and rotatable about the periphery of said driving disc and geared to said pinion, a clutch adapted to lock said annu-lar member to said driving disc, free gears mounted upon said power shaft and geared to said pinion, and a clutch mounted on and rotating with said power shaft and adapted to positively engage either of said free gears, substantially as described.

883,973. Lamp Bracket. Edwin M. Rosenbluth, Philadelphia, Pa. Filed June 21,

1906. Serial No. 322,666.

1. A lamp bracket comprising means arranged to detachably support a lamp; and means, comprising a rod, adjustable in the direction of its length toward and from said lamp, and arranged to detachably support a license panel, which is also adjustable with respect to said rod, said supporting means being so co-operatively connected that said panel is illuminated by said lamp, substantially as set forth.

883,981. Gas Generator for Explosive Engines. Henry K. Shanck, Cleveland, O., assignor to The Euclid Motor Company, Cleveland, O., a Corporation of South Dakota, Filed Jan. 23, 1906. Scrial No. 297,423.

1. The combination in a quick speed explosion engine, of means for vaporizing the explosive fluid and for commingling the same with air to a predetermined degree, comprising an elongated tubular commingling chamber, a nozzle for the fluid at one end thereof arranged to discharge the fluid longitudinally of the chamber, a needle valve having a shoulder in said nozzle, means for obtaining a minute adjustment of said valve, a lateral air inlet in said chamber adjacent to said nozzle, a valve in said air inlet, a governor operatively connected with a rotating part of the engine, and coordinating instrumentalities for operating the valves of the fluid nozzle and air inlet whereby an unvarying proportion of aid and fluid is obtained, said co-ordinating parts being operatively connected with and controlled by said governor, substantially as described.

884,053. Explosive Engine. Henry L. F. Trebert, Rochester, N. Y., assignor to Brownell-Trebert Company, Rochester. N. Y., a Corporation of New York. March 20, 1905. Serial No. 250,908.

1. In an explosive engine, the combina-tion with a cylinder having a head provided with two apertures, and gas inlet and exhaust pipes leading over the head at opposite sides thereof in proximity thereto, and communicating with the apertures therein, of valves controlling said pipes, stems thereon extending upwardly through the pipes and mechanism located between said pipes and co-operating with the valve stems.

884,117. Motor Vehicle. Alexander Winton, Cleveland, Ohio. Filed May 25, 1903. Serial No. 158,714. Renewed Oct. 1, 1907. Serial No. 395,369.

1. In a motor vehicle, the combination of a horizontally and transversely arranged engine frame, side sills longitudinally arranged and intermediately connected to opposite ends of the engine frame, a water cooler connecting and constituting a cross-beam or sill for the forward projecting ends of the side sills, and supporting driving and steering axles connected with the oppositely projecting ends of the said side sills

884,118. Lubricator. Alexander Winton, Cleveland, Ohio. Filed Nov. 12, 1904. Serial No. 232.489.

1. A lubricator including an oil chamber, a rotatable feed roll located therein, the oil chamber having an oil passage way extending thereinto, an oil gatherer adapted to gather the oil from the feed roll and de-liver it to the oil passage, means for feeding oil to and maintaining it at a level within the chamber below the gatherer and the inlet end of the passage way, and an adjustable oil remover located adjacent the surface of the roll and at a point in advance of the said gatherer in respect to the direction of rotation of the feed roll.

884,172. Variable Speed Gearing. man T. Lewis, Milwaukee, Wis., assignor of two-thirds to Retta Pierce Davenport and Everett C. Rockwell, Chicago, Ill. Filed April 13, 1907. Serial No. 367,911.

In transmission gearing, a driving member, rotatable independently thereof, an intermediate member, gear connections be-tween said driving and driven members, part of said gear connections being mounted on said intermediate member, a stationary member and a controlling member permanently connected to said intermediate member to thereby rotate therewith or prevent it from rotating, said controlling member being adapted to occupy a plurality of positions, in one position in engagement with said driven member to thereby cause

it and the driving member to rotate at equal speeds, and in another position in engagement with said stationary member to there-by arrest said intermediate member and cause the motion of the driving member to be transmitted to the driven member by way of said gear connection, in combination with means for shifting said controlling member to its different positions, said shifting means comprising a hand operated member having beveled surfaces co-oper-ating with beveled surfaces on said stationary member.

884.193. Vehicle Steering Mechanism. William McGlashan, Cleveland, Ohio, assignor to the Winton Motor Carriage Company, Cleveland, Ohio. Filed Nov. 12. 1904. Serial No. 232,455.

1. An improved vehicle steering mechanism, comprising a suporting casing, a rotatable steering post having a longitudinal bearing and also a transverse thrust-bearing in the casing, a longitudinally movable sleeve located within the casing and hav-ing internal screw threads, the steering post having external screw threads engaging the threads of the sleeve, means for preventing the rotation of the sleeve, and a connection between the sleeve and the steering wheels of the vehicle.

884,201. Fender and Brake Attachment for Automobiles. John O'Leary, Cohoes, N. Y., assignor of one-half to Edward Penrose. Cohoes, N. Y. Filed Dec. 24, 1907. Serial No. 407,881.

1. In an automobile, car or the like, the combination with the front axle. front wheels, and movable connections carried by the axle and to which the wheels are attached, of a fender secured to the said movable connections and having its rear portions located within the sides of the wheels.

884,294. Tire Sealing Device. George H. Phillips, Plymouth, Mass., assignor of onehalf to himself and one-half to George F. Soule, Plymouth, Mass. Filed Oct. 30, 1907. Serial No. 399.818.

A cealing device for pneumatic tires comprising a scaling member having a shoulder. adapted to fit against the wheel rim, and a comparatively thin edge, and means adapted to embrace the tihe and wheel rim for securing such sealing member in place.

12,777. Reissue. Vehicle Wheel Rim Frank A. Seiberling, Akron, Ohio. Filed March 3, 1908. Serial No. 419.056. Original No. 765,044, dated July 12, 1904. Serial No. 192,947.

A vehicle wheel rim of the class described, consisting of a base rim and a band capable of contraction on and a reversal of position around said rim, one of the sides of said band being formed into a hook shape and the other with an approximately vertical side and fashioned to engage, in alternation, the clencher and inextensible edge tires, substantially as and for the purpose described.

884,488. Running Gear for Harry W. Hancock, Chicago, III. Filed Sept. 23, 1904. Serial No. 225,628.

1. In a running gear for vehicles, in combination, a bed frame; and means for supporting said bed frame comprising a spring at each end of said bed frame said spring being attached at each of its ends to said bed frame, a wheel carrying arm pivottally connected intermediate its ends with each of said carrying springs and adapted to support an axle at one end, and means for yieldingly connecting the other end of each of said carrying arms with said bed frame.



Dealers can make quick sales with this machine. The upkeep is very light; has solid rubber tires; goes through deep mud and sand, and climbs steep hills. Double cylinder, air cooled, 10-12 H. P. It's your loss if you don't get the agency. Write,

W. H. KIBLINGER CO..

Box 250.

AUBURN, IND.

Apperson

"OUALITY NOT QUANTITY" If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.

Wico Adjustable Spark Plug



\$1.00 Each

Guaranteed

WITHERBEE IGNITER CO.,

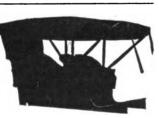
1876 Breadway, New York

Ready-Fiated Tires.

They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY 1788-1790 Broadway, cor. 58th St. New York City. "Reep your eye on Continentals"

SPRINGFIELD TOP (Pat. 1895) Aluminum **Bodies SPRINGFIELD** METAL BODY CO., 366 Birnie Ave., Springfield, Mass.





Full of Air. Tire expense cut in two.

Cannot Blow Out Rim Cut or Puncture

As Flexible as Rubber Anti-Skid

Thousands in use.

Kimball Tire Case Co. 172 Broadway Council Bluffs, lowa

For Light Runabouts

Bevel Cear Drive Roller and Ball Bearings Internal Expansion Brakes

Drawings and Prices on Request.

A. O. SMITH CO. 243 Clinton Street, MILWAUKEE



DECARBONIZER

The Great Gas Engine Cleaner
Increases power 20-25 per cent. and removes Carbon from all parts of engine.
Sample Quarts \$1.50. Discount to the
trade. Agents wanted. 50,000 Users
guaranteed.
General Accumulator & Battery Co.
140 Second St.. MILWAURER, WIS.

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.





For catalogues, address THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS.

TOPEKA, KANSAS

THE SAME OLD STORY
(New every race)

E I SE M A N N M A C N E T O
VICTORIOUS AT PALERME IN FICILY Voiturettes, WO Voiturette, Leon The Targa Florio BY Driver, Guippone. Equipped with an Eisemann Magneto LAVALETTE & CO., 112 W. 42nd St.. New York



THE MOTOR WORLD PUBLISHING COMPANY 154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Motor World

for one year, commencing with the issue of Name_

Address

This is the

PULLMAN



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.

1908 Model D. 50 H. P.
Nev. factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COM. ANY,
Broadway, cor. 56th St.
New York.

Exclusive LOGAN

1-All transmission gears and differentials of Krupp's chrome nickle steel

For other features write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chilhoothe, D.

Before You Buy a Car
telephone a Mitchell agent and tell him you
want to be shown the "silent argument" the
Mitchell offers in demonstration. He'll be
glad to show you—call him up—it's worth
money to you if you are thinking of buying
an automobile. (No obligation.)
MITCHELL MOTOR CAR CO.,
283 Mitchell St., RACINE, WIS.

"AURORA" THE

Runabeut \$775—20 H. P. Commercial Wagon \$1000-20 H. P.

Live proposition to agents. AURORA MOTOR WORKS.

Aurora, Ill.

A SUPERB LINE OF CARS—
THE JACKSON
"No Sand Too Deep—No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,000.

JACKSON AUTOMOBILE CO., Jackson, Mich.



"CONTINENTAL" MOTORS ARE STANDARD



Get our quota-tions on high grade two and four cylin-der motors, 10 to 45 horsepower. They are equipped with self-contained oiling system and ready for attaching magneto. Highest grade workmanahip, efficient, durable and simple. Also clutches and trans-Send for catalogue. horsepower.

CONTINENTAL MOTOR MFG. CO., Muskogen, Mich. K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

For catalog, address Dept. 16. NORDYKE & MARMON CO. INDIANAPOLIS, IND. (Estab. 1851)

TRUFFAULT-HARTFORD

The Device that made Safe, Speedy and Comfortable Automobiling Possible. Write for catalogue, Department D.

HARTFORD SUSPENSION CO., E. V. Hartford, Pres. 145 Bay St., Jersey City, N. J.

Address Eastern Inquiries
Garford Motor Car Co.
of New York,
1540 Broadway,
New York City. Western Inquiries
Garford Motor Car Co.
of Cleveland,
1372 East 12th St.,
Cleveland.



FIFTY"



The best car that America has yet produced.

Pennsylvania Auto Motor Co. BRYN MAWR, PENNSYLVANIA

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are or-dering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



THIS



is equal to anv \$1.50 plug. Has big air chamber, protected porcelain, bronze non-sticking bushing, won't leak,—and will outlast two ordinary plugs At all dealers, or direct to you upon receipt of pri e-\$1.00.

THE R. E. HARDY & CO., 25 West 42d St, New York City

To Owners of Cars **Costing Over \$1800**

Add the neat, snappy little Brush \$500 Run-about to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit



Nuts That Require Tightening After considerable use the bolts driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, "07.

Use Columbia Lock Nuts
COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.

FRANKLIN Automobiles

How much power should an automobile have?

The Franklin 4-cylinder Type D automobile has 28 horse-power—7-horse-power to a cylinder; and that carries five people 45 miles an hour.

Many 4-cylinder automobiles—some of them carrying only five passengers—have 40 horse-power and upward. That is, every explosion gives a 50 per cent harder shock to the crank-shaft and the whole transmitting mechanism than you get in Type D.

Of course the whole machine has to be built bigger and heavier to stand this increased shock. The extra weight uses up a good deal of the extra power. What is left gives you a little more speed on fine smooth roads. But you can't go any farther in a day; because a heavy automobile is neither comfortable nor safe to run at speed on American roads.

So what do you get out of a bigger-powered 4-cylinder machine than Type D?

You can't use enough of the extra speed to give you more touring ability. And the extra weight makes you pay outrageously for gasoline and tires.

If you want a high-powered automobile the Franklin Type H gives you 42 horse-power properly balanced with six-cylinders. There's no shock at all. It carries seven passengers 55 miles an hour, and it only weighs 2,600 pounds. Think of that! Less than the average 5-passenger, 4-cylinder machine. And it costs less to own; yet no automobile of any power has more touring-ability than this Type H.

No jolting from the roads, either. The Franklin laminated wood frame and 4 full-elliptic springs absorb the road-jar. This makes easy-riding both for the passengers and the machine. With their light-weight and high-grade construction the Franklins are the longest lived of all automobiles. Depreciation-cost is low; running-cost is low. And you get the good of all the power all the time.

What's the sense of paying big up-keep charges for weight and power that you can't use?

Write for the catalogue describing Franklin models

16 h. p. 4-cylinder Runabout \$1,750 | 28 h. p. 4-cylinder Touring-car or Runabout....\$2,850 | 42 h. p. 6-cylinder Touring-car or Runabout... \$4,000 | Prices f. o. b. Syracuse

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

Large Sales

make it possible for us to import THE CELEBRATED BRAMPTON CHAINS from ENGLAND (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our best advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like THE CELEBRATED BRAMPTON CHAIN because some of the other chain makers began to copy the design and shape of the BRAMPTON CHAIN links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the BRAMPTON CHAIN than ever before. These chains somewhat resemble the BRAMPTON in appearance, but the manufacturers of such chains have been unable to copy the material-self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the BRAMPTON MOTOR CHAIN in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the BRAMP-TON FILLS THE BILL, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

We also carry in stock the BRAMPTON CHAINS to fit Foreign Cars-Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the CELEBRATED BRAMPTON CHAIN if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for BRAMPTON CHAINS, and they cannot be bought from anyone else except through our Agents.



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varmished furniture or woodwork of any kind. It will remove stains, cover scratches; leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guaranteed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller lack \$3.00 cech 100.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

Branches: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass. 318-320 N. Bread St., Philadelphia, Pa. 1529 Euclid Ave., Cleveland, O. 824Main St., Buffalo. 227½-229 Jefferson Ave., Detroit. 1392 Bedford Ave., Broeklyn, N. Y.



Firestone[®] Pneumatic Tires

THE TIRES OF STERLING QUALITY"

are today placing the highest standard for Pneumatic Tires, just as Firestone Solid Tires are the standard by which all solid tires are compared.

In their manufacture they are given the very best workmanship and the closest possible inspection, insuring absolute satisfaction to the user.

WE FURNISH TIRES TO FIT ANY RIM.

Branches and Agencies Almost Everywherere.

FIRESTONE TIRE & RUBBER CO., Akron, Ohio



The Severest Tests

have demonstrated time and time again that the principles employed in

Timken Roller Bearings

are the only correct ones that insure perfect transmission of all power to traction use, eliminating both friction load and end thrust.

A Stoddard Dayton Stock Car equipped complete with Timken Roller Bearings finished April 12th, a ten-day century run, 1,000 miles over the roughest roads with all adjustments sealed, something impossible for a car equipped with the ordinary

type of bearings to perform. This car, as do all cars of the **Stoddard Dayton** make, carries a full equipment of **Timken Roller Bearings**, as tests made under the most adverse and severe conditions have proven them an economical factor in the saving in wear and tear from strain alone.

And these are some of the reasons why more than 65 per cent. of all the makers of high grade American Automobiles and over 90 per cent. of the Commercial Truck builders are now using them.

Are you? If not, won't you let us give you some figures that prove. These are yours for the asking.

The Timken Roller Bearing Axle Company, Canton, Ohio Branches: 10 East 31st Street, New York 429 Wabash Avenue, Chicago

Maxwell.

THE RUMOR SEASON

is here again, just as it always comes with the regularity of the malaria germ, or the hay-fever, or the June-bug; only it becomes more virulent as it gets older.

The Whooper Company—so Dame Rumor says—will have a world-beater in the shape of a motor that has more cycles to it than you have fingers and toes, to sell at —\$. Just wait and see.

The Spouter Company has something up its sleeve that will be a combination of features as varigated as the ingredients in a mince pie, to sell at — \$. They will show you later.

The Holler Company has a new startler of the waittill-we-show-you-and-get-left kind, a conglomeration of metals so diversified as to make the most enterprising experimenter in the mixer of metals quit his job in disgust, and it will sell at — \$. A lick and a promise.

And so it goes on—if you have been in the business long enough you will know the story.

Not so facetious, but similar in trend, are the reflections as one scans the horizon of trade promises. I have been asked what we are going to do, and when I started to write this ad it was to give the answer:

We have found that with Maxwell principles of automobile construction and with honest manufacture and decent selling methods old terra firma is a good enough place to do business on and we are going to stay on earth, saving ourselves the trouble to come down again after the soaring flights of fancy in which some of our friends now indulge.

We are in the automobile business for the profits that are in it, and we are satisfied with the results. It pays to build the only good moderate priced automobile. Our dealers are satisfied, for they, too, find legitimate effort rewarded with a legitimate profit. Maxwell owners are satisfied, because they know that they possess a car that will give satisfactory service at minimum expense, every day in the year, and that looks as stylish and imposing—without extra charge for the style and imposition—as the highest-priced cars made anywhere. Being built upon well-tried design and honestly made they are free from the find-me-out-later-on handicap of some other manufacturers.

We will sell Maxwell cars, some ten thousand of them, at legitimate prices—prices high enough to give to our dealers and to ourselves a legitimate profit and low enough to give to every purchaser the full value of his money.

The only change we will make will be in the distribution of profits resulting from the sale of Maxwell cars. Here the new arrangement will favor the individual dealer, giving the hustler the hustler's reward. If you are a hustler we want you and you will want us So let's get together as soon as possible. Write to me now, telling me something of your territory and its sales possibilities, and I will communicate with you and tell you of the new Maxwell selling plan, the plan for business-getters.

Benj Briscae President

MAXWELL-BRISCOE MOTOR CO.

Members A. M. C. M. A.

P. O. Box 106, Tarrytown, N. Y.

Factories: TARRYTOWN, N. Y. NEWCASTLE, IND. PAWTUCKET, R. I.



Thanks to AJAX quality, it doesn't cost us one per cent. to back up the guarantee that goes with every AJAX tire—5,000 miles of road service.

Do you know any cheaper or more effective advertising argument than that? Or any better recommendation for a tire? Puts the burden of proof on us—relieves you of all risk when you buy AJAX tires.

Write for copy of Guarantee, stating what size tire you are using.

Address Dept. A.

AJAX-GRIEB RUBBER COMPANY

GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Foctories: Trenton, N. J.

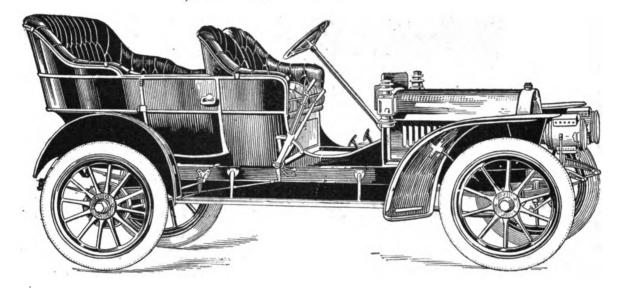
New York, 1776 Broadway Boston, 819-a Boylston St. Chicago, 1418 Michigan Ave. Detroit, 743 Woodward Ave.

BRANCHES:
Denver, 1529 Cleveland Place
Seattle, 1102 Broadway
San Francisco, 460 Golden Gate Ave.
Los Angeles, 1040 S. Main St.

Agents in all large cities.

What happened upon the announcement of the new

\$1400 Gille "Thirty"



When on May 31st we announced that work had actually commenced on the manufacture of parts for 10,000 high grade 30 horsepower four-cylinder cars of Cadillac quality, to be sold at \$1,400.00, it was naturally supposed that a certain amount of interest would be created. But honestly we did not expect it to "turn the automobile world upside down" so to speak. It seems, however, that it did, and after analyzing the situation we see that really it is no wonder that a cyclone of enthusiasm swept over not only America, but practically all over the civilized world, amongst dealers, users and prospective users.

Truly the Cadillac "Thirty" was what the world had been waiting for. No one realized this and "took the tip" more than the dealers themselves.

Let's see what happened:

The announcement was made to the public on Sunday, May 31st. On Monday we were almost flooded with telegrams from automobile dealers, of which the following are fair samples:

"Don't close agency for this territory until we see you. Will be in Detroit to-morrow."

"If will give us Cadillac agency will guarantee sale 200 cars. Ample deposit."

"Are you willing to renew contract for next year on basis double business."

"What deposit will you require on hundred new Cadillacs?"

"Will agree handle Cadillacs exclusively and deposit on hundred fifty cars."

On Tuesday the postman was overburdened and by the end of the week we were deluged. In addition to the immense number of inquiries from prospective buyers we received more than 300 letters from Automobile dealers offering to place orders for from 10 to 300 cars each with deposits. Our Sales Department was simply swamped. They could not even read all the letters, much less take up each individual case and handle it properly, so they had to resort to sending out form letters telling the applicants that their propositions would be considered as promptly as conditions would permit.

And the new "Thirty" will not be the only good thing. There will be others, including all the old standbys.

1909 will truly be a CADILLAC year

CADILLAC MOTOR CAR COMPANY.

(Members)

Detroit, Michigan

It has been worth several hundred dollars to a good many motorists to learn by experience that

MORGAN & WRIGHT TIRES **ARE GOOD TIRES**

"Experimenting around" in the buying of tires might be a good policy if it was less expensive, but users of MORGAN & WRIGHT tires are thru with it.

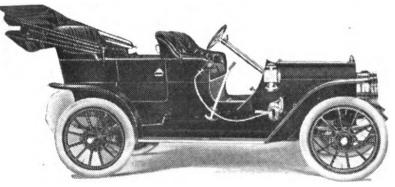
Mr. H. Sherer, of Detroit, who has "been thru the mill," says: "I have owned automobiles since 1902, and have had a great deal of practical experience with tires. In 1906 I shifted to foreign tires. I find, however, that MORGAN & WRIGHT tires give me the best results of all, and I have decided to use them exclusively."

You can rarely find a motorist who has experimented with other brands after trying our tires. Does that fact suggest anything to you?

MORGAN & WRIGHT, Detroit

Branches, Agencies or Dealers Everywhere

OAKLAN



Model B Touring Car, price \$1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, \$75.00 extra. Runabout, \$1,300.

(A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense is essential.

I The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.



No. 18

Palmer-Singe Stx-Fifty. Racing Car \$2,450

Palmer-Singer Four-Thirty

All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Passenger Touring Car

49 H. P.

\$4,000



16-30 H. P. \$3,000

Palmer-Singer Six-Sixty, \$2,850

The Sixty-Six is a touring runabout capable of record-breaking speed and still of carrying three or more passengers with perfect comfort on long and hard runs. It will far outdistance and outwear any car of its class at even \$2,000 more in price.

Metropolitan Distributors the SELDEN

1620-22-24 Broadway, New York 1921 Michigan Avenue, Chicago



He'll get you sure!

YOU CAN'T ESCAPE!

There's only one way out of it—you cannot "protect" against the puncture devil, even by overloading your wheels with heavy armor which destroy the resiliency of your tires.

Why not meet your puncture face to face and when he stabs your tire, laugh him to scorn—produce your

STEPNEY SPARE WHEEL

and be on your way in less than a minute.

The Stepney Spare Wheel clamps to the rim of your wheel without removing your punctured tire.

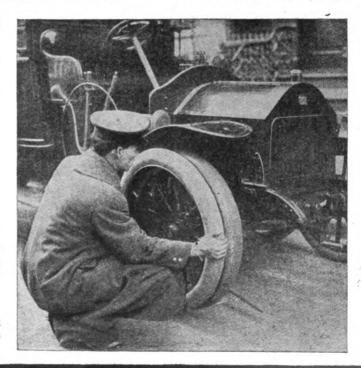
When you finish your journey remove the Stepney and repair the puncture.

WRITE FOR DESCRIPTIVE MATTER, PRICES, ETC.

THE SPARE MOTOR WHEEL OF AMERICA

(Limited)

CHICAGO 236 Michigan Ave. NEW YORK OFFICE 341 Fifth Avenue







Here is an Unusual Car!

FOUR cylinders; full 30 horsepower; adjustable roller bearing transmission; transmission gears made of special steel that will neither mar nor chip; floating type rear axle; full elliptic rear springs.

With tonneau, a complete touring car; full size; five passenger capacity; 108-inch wheel base; 34-inch wheels and 4-inch tires.

Quiet, powerful, flexible and handsome.

Tested by three seasons' continuous service and perfected by the knowledge gained from twelve thousand Ramblers in daily use.

Where else can you obtain similar value—size, power, efficiency, reliability, appearance and comfort?

Write today for the special 248 catalog and complete particulars

Thomas B. Jeffery & Company

Main Office and Factory: KENOSHA, WIS.

Brauches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco

Volume XVIII.

New York, U. S. A., Thursday, June 18, 1908.

No. 12

WHEAT BELT PROSPEROUS REGION

Reuschaw's Visit Causes Inspiring Reports of Demand for Cars—Fine Garages Built in Small Towns.

R. C. Reuschaw, sales manager of the Reo Motor Car Co., who came to New York last week, after a business trip through the wheat belt, Kansas, Nebraska, Oklahoma, and the Dakotas, brought with him glowing reports of the prosperity prevailing in that part of the country and of the keen demand for automobiles that has resulted.

The immense wheat crop. Rauschaw states, has lined the farmers' purses, and it is not an uncommon sight to see them drive into town, where they dive into their pockets and bring out a roll of greenbacks big enough to choke an ox, from which they peel off the price of a motor car almost as if it was an every day occurrence. To say nothing of others, Reuschaw himself brought back orders for five carloads of Reos which are to be shipped by express. The number and character of garages that are being crected is also impressive. In many places of 2,000 or 3,000 inhabitants the Reo man found fine modern, fireproof structures that would do credit to cities of even 100,000 people.

Fred C. Robie, of the Excelsior Supply Co., Chicago, who is in New York this week, confirms all that Reuschaw says. His company covers the West with a big force of men and does the bulk of the accessory business. The demand for supplies, he states, leaves no room for complaint and outside of the bigger cities, it has not been unsettled by price cutting.

Shanks Leaves Winton for Retailing.

Charles B. Shanks, for nine years identified with the Winton Motor Carriage Co., Cleveland, most of the time as sales manager, has resigned that office to engage in the retail business. He will open a store in Cleveland where, under his own name, he

will handle the Thomas-Detroit exclusively. Charles W. Churchill, manager of the Winton branch in New York, will succeed to the position left vacant by Shanks and Charles W. Mears, who, under Shanks's direction, has handled the Winton advertising, now will have full charge of that department.

Ex-Mayor to Sell Spare Wheels.

Sherburn Becker, former mayor of Milwaukee, is going into the spare wheel business. He has secured the Stepney representation for the State of Wisconsin. T. D. Grimke-Drayton, chairman of the Spare Wheel company's board of directors, is now in this country and is reported as being well satisfied with the progress that the Stepney wheel has made here.

M. & W. Branch Moves to Los Angeles.

Morgan & Wright have transferred their Pacific Coast branch from San Francisco to Los Angeles. Their representation in the former city has been turned over to a new firm, Weinstock, Nichols & Co., which was formed for the purpose of acquiring the agency.

Pope to Sell Columbia Steel Mills.

It is probable that the Columbia Steel Mills, Elyria, Ohio, which is one of the Pope Mfg. Co.'s properties, shortly will be disposed of by the receivers. They have been offered \$190,000 for it and negotiations for its sale at that price practically have been concluded.

New Factory Probable at Dayton.

Henry Arnstein, of Dayton, Ohio, who has built several cars styled the Big Four Flyer, is preparing to engage in the business on a large scale. The organization of a stock company and the construction of a factory in Dayton are included in his plans.

New Thomas Six at Popular Price.

The E. R. Thomas Motor Co., Buffalo, has under way a six-cylinder car which will list at \$2,500—a price which will compel a lot of notice to be taken.

POPE AFFAIRS ARE AIRED AGAIN

Creditors and Receivers Exchange Opinions in Chancery Court—Creditors' Chairman Assumes a New Role,

Reports that friction had arisen between the receivers of the Pope Mfg. Co. and the creditors' committee made it appear probable that the hearing of the receivers' petition to the Chancery Court of New Jersey for authority to continue the business would throw a strong light on the situation. The petition was heard yesterday by Vice Chancellor Howell in Newark and though it was plain that the creditors' committee wants its money in a hurry and in a large lump, the situation was not illuminated to anything like the anticipated extent.

According to the reports that were current, the chairman of the creditors' committee, who represents the note-brokers' interests, had "touched" the receivers for about \$40,000 for "services rendered" which suggestion promptly had been repudiated, as also was a second proposal of the same nature which, however, reduced the amount by several thousand dollars. However this may be, it is certain that Chairman · Swartwout's firm has addressed a communication to the banks involved proposing that the firm be allowed a 3 per cent, commission on all collections that may be made. This letter is said to have been issued without the knowledge or consent of the other banking representative and that as a result, some extremely emphatic opinions were exchanged between the two men.

The fact is that the Pope receivers have about \$1,250,000 in cash in the various States and that the creditors' committee is not content with the 25 per cent. dividend which has been declared and the 25 per cent. additional which is in prospect. Like Oliver Twist, they want more and without waiting for it. The receivers, while admitting that the funds in hand are sufficient for a larger dividend, contend that if it is

paid, it will cripple their resources and leave them without sufficient working capital to properly conduct and continue the business.

At the hearing yesterday, Receivers Pope and Yule were present, accompanied by the receivers' New Jersey counsel, Sherrard Depue, of Lindabury, Depue & Foulks, of Newark, and Mr. Yule's personal counsel, Scott McLanchan, and by L. H. Freedman, of Joline, Larkin & Rathbone, of New York. Of the creditors' committee there were present, R. H. Swartwout, chairman, and C. N. Gillett, secretary. committee was represented by Counsellor Percy S. Bryant, of Hartford, while Walter S. Schutz, also of Hartford, represented a number of small creditors. Messrs. Swartwout, Bryant and Schutz all voiced the same opinion, which was tersely expressed by Swartwout when he said:

"We want our money. If the stockholders want to continue the business, let them furnish the funds. The creditors get only the face value of their claims with interest; the stockholders get the rest."

"How much will it require to continue this business for a year?" asked the court. "About \$800,000," responded Receiver Pope.

Receiver Yule said they might be able to get along with \$600,000, but should have \$800,000, as manufacturing conditions have altered in the last two years.

Mr. Pope stated that the receivers will this week ship the last of the 1908 output of automobiles and for two months had been refusing orders and returning deposits. If permitted to continue the business and to make up 700 cars for next year, he said that all would be sold and deposits secured within three weeks.

Mr. Bryant disclaimed any intention on the part of the creditors' committee to criticize the receivers. He said they had done admirably and given full satisfaction to the creditors, but that they had not shown that they were manufacturing at a profit.

Receiver Yule responded that the report of the certified accountant would show that the business could be continued profitably.

The court inquired whether the creditors' counsel had asked to see this report, and if so, had they been refused. Mr. Bryant answered in the negative.

Vice Chancellor Howell then ordered that one copy of this report be given to the court and another copy to Mr. Bryant, also assuring Mr. Pope that it would not be printed. Pope had said its publication would give to business rivals valuable information regarding Pope manufacturing methods.

"It looks to me from the statements before me that you ought to be able to pay 75 per cent. in four months and have money enough to keep the business from going to the dogs," was one of the concluding remarks of the court. Chairman Swartwout. of the creditors' committee, rejoined:

"If we get 75 per cent, in four months it will be entirely satisfactory."

THE MOTOR WORLD

The Week's Incorporations.

Buffalo, N. Y.—Kane Motor Supply Co., capital increased from \$30,000 to \$50,000.

Rochester, N. Y.—United States Automobile Co.; capital increased from \$200,000 to \$300,000.

Somerville, Mass.—Somerville Automomobile Co., The; capital increased from \$5,000 to \$15,000.

Providence, R. I.—Page Motor Co., under Rhode Island laws, with \$50,000 capital. Corporators—Arthur A. Page, Samuel J. Greene, O. Fletcher Best.

New York City, N. Y.—Courtney Rubber Co., The, under New York laws, with \$100,000 capital. Corporators—W. J. Courtney, J. G. Phell, T. M. Johnson, New York City, N. Y.

Albany, N. Y.—De Freest Automobile Co., The, under New York laws, with \$5,000 capital; to conduct garage. Corporators—Matthew De Freest, John Morrissey, John Cleary, Albany, N. Y.

New York City, N. Y.—Automobile Reconstruction Co. of New York City, under New York laws, with \$5,000 capital. Corporators—E. J. Forham, H. H. Brown, F. W. Mills, New York City, N. Y.

Pittsburg. Pa.—Iverson Mfg. Co.. under Pennsylvania laws, with \$100,000 capital; manufacturing automobiles and automobile parts. Corporators—L. Iverson, J. C. Conley, W. D. Rowan, Pittsburg, Pa.

New York City, N. Y.—Motor Taximeter Cab Co., under New York laws, with \$150,000 capital; to manufacture, operate and rent vehicles. Corporators—H. C. Kibbe, H. F. Sewall, J. P. Murray, New York City, N. Y.

New York City, N. Y.—Stromberg Motor Devices Co., of New York, under New York laws, with \$2,000 capital. Corporators —Seward Davis, Upper Montclair, N. J.; Oliver Williams, Samuel Hodas, Brooklyn, N. Y.

Durham, N. C.—Bull City Transit Co., under North Carolina laws, with \$25,000 capital; to operate automobile lines from Durham to Chapel Hill and other points. Corporators—J. T. Fowler, Zet Fowler, Ralph Smith.

Camden, N. J.—Motor Commercial Delivery Co., under New Jersey laws, with \$200,000; to manufacture automobiles, engines, etc., and general transfer and delivery business. Corporators—F. R. Hansell, W. F. Eidell, J. A. MacPeak, Camden.

New York City. N. Y.—United Motors Co., under New York laws, with \$100,000 capital; to manufacture motors, engines, machines, cars, carriages, wagons, boats, flying machines, etc. Corporators—H. T. Tobey, C. R. Hathaway, C. W. Cuthell, New York City, N. Y.

Brooklyn, N. Y.—Motor Safety Mfg. Co. of the City of New York, under New York laws, with \$100,000 capital; to manufacture motor appliances for automobiles, motor

boats, etc. Corporators—J. T. Barber, J. P. Carlson, G. Fey, Brooklyn, N. Y.

Joplin, Mo.—Century Automobile Co., under Missouri laws, with \$10,000 capital; to manufacture, repair and sell automobiles and automobile appliances. Corporators—Edward P. Rhodes, Frank M. Say, Frank A. Holden, Willard L. Butts, Charles W. Bartlett, H. G. Packer.

New York City, N. Y.—Universal Taxameter Co., under New York laws, with \$75,000 capital. Corporators—Harry M. Spence, 2159 Eighty-third street, Bensonhurst, N. Y.; Edward T. Moriarty, 39 West 130th street, New York City, N. Y.; Albert W. Bonynge, 1022 Hudson street, Hoboken, N. J.

In the Retail World.

Browning Bros. have purchased the Ogden (Utah) Automobile Co. The business will be removed about July 1st to the new garage on Grant avenue, which now is being erected for the Brownings.

The Fred A. Bennett Auto Co., which handles the Reo cars in Spokane, Wash., is building a new garage on Second avenue. in the "automobile section." Its completion is looked for about the first of July.

Ralph Hain and George M. Hurley, of Los Angeles, Cal., have formed the Hain-Hurley Auto Specialty Co., and "opened up" at 1205 South Main street. They will manufacture a timing device and other specialties and conduct a general repairing business.

The Penn Automobile Supply Co., of Philadelphia, has removed from its old quarters in the basement at 201 North Broad street, to a remodeled building at 236 in the same street. The entire building will be devoted to the company's business.

Dunn & Gore is the style of a new firm which has taken over the accessory and supply business of the A. S. Thompson Co., at 512 South Broadway, Los Angeles, Cal. The firm is composed of W. D. Dunn and G. R. Gore, the former of whom previously was connected with the Thompson company.

O. A. Clark, president, and C. C. Henry, have disposed of their interests in the Pope Auto Co., Newark, N. J., and the Summit (N. J.) Auto Co., to B. C. Fincke, who becomes president, and C. A. Dickson, secretary-treasurer. The Summit establishment is conducted as a branch of the Newark concern.

Henry Goes to Everitt-Metzger-Flanders.

David C. Henry, formerly of the Electric Vehicle Co. and latterly with the Columbus Buggy Co., has engaged with the new Everitt-Metzger-Flanders Co., Detroit, and will cover territory in their interests.

Morley Diamond Manager at Detroit.

Bert Morley has been appointed manager of the Diamond Rubber Co.'s branch in Detroit



8,594,22

\$343,242.63

\$181,997.15

\$7,430.05

For pay rolls, factory and office.

POPE AFFAIRS SHOW PROGRESS

Receivers Report Large Volume of Sales for Month of May-Substantial Addition to the Cash Assets.

The report of the receivers of the Pope Mfg. Co., covering their transactions during the month of May discloses an increase of the substantial progress that has characterized the receivership. The figures, as filed in the Connecticut Superior Court, are

as follows:	Court, arc
as follows:	
Receipts from collection of ac notes receivable of Pope Mfg. Co Hartford accounts\$1,331.23 Westfield accounts 230.18 Hagerstown accounts 88.70	o.:
	\$1,670.11
Receipts from sales by receivers. Receipts from deposits by customers on orders for auto-	315,585.99
mobiles	4,196.57
On accounts and notes receivable	.90
Received from rental of Thomp-	
sonville factory	100.00
advances	382.70
advances	11.87
Receipts from and for account of receivers in:	
Westfield factory \$32.55	
Hagerstown factory 4,653.22 New Jersey 128.77	
Illinois	•
Of Pope Motor Car	
Toledo, Q 1,010.66 Of Pope receivers, In-	
dianapolis 92.33	
•	\$6,007.50
	\$327,955.64
Cash disbursed for May, 1908:	
Refund of deposits received on	

Cash dispursed for May, 1908:	
Refund of deposits received on miscellaneous undelivered orders	\$1,106.40
Receivers' expenses and pay-	
ments for purchases:	
Pay rolls\$52,225.63 Miscellaneous and sell-	
ing expenses 2,129.08	
Materials and supplies. 94,464.43	** ** ** * * * *
	\$148,819.14
Special advance for expenses	600.00
Receivers' fees:	
Albert L. Pope \$2,290.32	
George A. Yule 3,500.00	
	\$ 5, 79 0.32
Payments in settlement of accounts with:	
Receivers in Mass\$2,342.95	
Receivers in Maryland. 3,621.65	
Receivers in New Jersey 174.42	
Receivers in Toledo 316.48	
Receivers in Ind'napolis 67.30	
Federal Mfg. Co 1,925.00	\$8,447.80
	φο,447.00
	\$164,763.66
Bal. Amer. Nat Bk\$223,099.16	
Bal. Phoenix Nat Bk. 197,080.16	

266.19

\$422,261.64

66,168.39

1.816.13

Bal. First Nat Bk.....

Cash in office

Accrued liabilities of receivers:

For materials, supplies and mis-

cellaneous expenses

	\$74,762.61
Balance due receivers of Pope	φ/ τ,/ 02.01
Mfg. Co. and Pope Motor Car Co. in other districts Accounts receivable from sales	397.19
by receivers, April 30, 1908, per last report	163,624.38 361,615.30
	\$525,239.68
Less cash collections for May, 1908\$315,585.99 Deposits credited to	

tra accounts	27,656.54
Balance May 11, 1908	.,
Balance due from rec	eivers_of
Pope Mfg. Co. and	Pope Mo-
tor Car Co. in other	districts
for transfer of me	rchandise
and supplies and	advances

for expenses

accounts receivable, cash discounts and

miscellaneous con-

Increased Demand for Accessories.

The prediction, made by W. B. Miller, secretary of the Diamond Rubber Co., in a rather widely published interview last December, that even though the automobile business in general for 1908 might be much smaller than in 1907, the accessory manufacturers would have an active year, has been more than confirmed. As a matter of fact, the Diamond people say that the prediction did not go far enough, so far as their own business is concerned. Since March, the Diamond factories have been working to their fullest capacity, and the daily tire production was never so large as it has been during the past three months. This applies not only to the manufacture of tire casings, but inner tubes as well. A notable feature of the demand for tires tire casings, but inner tubes as well. The increased demand for quick acting rims, also, has thus far prevented the Diamond company from moving the factory in which the Marsh rim is made, from Columbus, Ohio, to the general factories at Akron, as will ultimately be done.

Prizes for Expertness in Tire Replacement.

Anyone who fancies that he is "quick on the trigger" needs but to present himself at the Continental Caoutchouc Co.'s headquarters, Broadway and Fifty-eighth street, New York City, on Friday, 26th inst, to prove or disprove his belief. On that date, the Continental people will give prizes of \$15, \$10 and \$5 in gold, to the persons who replace a Ready-Flated tire with others of the same kind in the shortest time, and next shortest time, respectively. While the competition is intended for chauffeurs, anyone else will be permitted to compete. Three trials will be allowed, and the time be taken on watches that register fifths of seconds.

The Auto Taxicab Co., recently incorporated with a capital of \$30,000, to operate in Chicago, has leased the first floor of 2441-2443 Michigan avenue for five years.

ADDING TO E. V. CASH BALANCE

Receivers' Report for May Shows an Increase of \$20,000-Sales Account Amounts to Over \$66,000.

Halsey M. Barrett and Henry W. Nuckols, receivers of the Electric Vehicle Co., Hartford, have filed in the Connecticut Superior Court a report of their transactions during the month of May. The statement shows:

Sales

Charges on account and cash sales \$66,115.82 Purchases.

On account	 \$16,855.35 203.77							
								\$17,059.12

Cash Statement.

Receipts:

Cash on hand May 1, 1908\$	100,933.39
Cash collected on E. V. Co. ac-	414.33
Cash collected on receivers' account	
	156,617.96

Disbursements.

Disbuisements.	
Pay roll	\$19,154.55
Traveling expenses	50.00
Creditors	16,253.14
Freight and express	103.29
Salesmen's commission	50.00
Petty cash	203.77
A. L. A. M	25.03
Water tax	178.80
Telephone and telegraph	301.02
Mercantile books	15 0 .00
Legal expense	44,25
	\$36,513.85
Cash receipts	\$156,617.96
and the second of the second o	26 512 05

Cash disbursed 36,513.85 Balance on hand June 1, 1908....\$120,104.11

Greuter Leaves the Matheson Company.

Charles R. Greuter, who since 1903 has been the designer for the Matheson Motor Car Co., Wilkes-Barre, Pa., has resigned, giving ill health as the cause. He will spend some time in a New York hispital having his leg, which was injured, treated. Later he expects to join another large automobile company.

New Cadillac "Thirty" Nearly Ready.

The new Cadillac "Thirty," the announcement of which at \$1,400, caused something of a furore, is so far advanced that it will be ready for the inspection of all agents who visit Detroit after July 1st. Sales Manager Benson states that deliveries positively will begin in September.

Remy Books Biggest Order for Magnetos.

What is believed to be the largest American order for magnetos ever placed just has been booked by the Remy Electric Co., Anderson, Ind. It was given by the Buick Motor Co. and calls for 10,000 instruments. Motor Co. and its call is for 10,000 instruments

WHITE WINS

Partial Summary of Victories, May, 1907-May, 1908

Perfect Score in Harrisburg Endurance Run

Tieing with three other cars in the contest of May 5th-6th, 1907. For the result of the "run-off," see below.

Fastest Time in Wilkes-Barre Hill-Climb

Defeating 45 high-powered gasolene cars, in the great contest on Decoration Day, 1907.

Fastest Time in Cleveland Hill-Climb

Defeating 40 high-powered gasoline cars.

Fastest Time in California Hili-Climb

Defeating the fastest of its gasoline competitors by nearly two minutes on the 27% mile hill at Witter.

Perfect Scores in Sealed **Bonnet Contest**

Both White cars entered made perfect scores in this contest conducted by the Automobile Club of America.

Officially Observed Non-stop Run of 1871 Miles

Held under the auspices of the Royal Automobile Club of England and certified by that organization.

Fastest Time of the Season on the Track

One mile in 1:02, ten miles in 12:54, and twenty-five miles in 29:07 at the Santa Rosa Track Meet.

Officially Declared Most Efficient Car

In the South Harting hill-climb, conducted by the Royal Automobile Club, the White won the contest because it developed at the rear wheels a greater percentage of its assigned horsepower than did any other car. The rating assigned to the White was 50 horsepower.

Wins English Dust Trials

Proving officially that it raises less dust than any other

Clean Sweep in the Glidden Tour

Three White entries make three perfect scores.

WRITE FOR LITERATURE

THE WHITE COMPANY, Cleveland, Ohio

NEW YORK CITY, Broadway at 62d St. PHILADELPHIA, 629-33 N. Broad St. SAN FRANCISCO, 1460 Market St.

BOSTON, 320 Newbury St. CHICAGO, 240 Michigan Ave.

PITTSBURG, 138-148 Beatty St. CLEVELAND, 407 Rockwell Ave.

Won Hower Trophy

The single White runabout entered in the Glidden Tour defeated a dozen high-priced gasoline runabouts competing for this prize.

Won California Reliability Contest

In the original contest held September 20th, two Whites tied with two gasoline cars. In the "run-off" held November 15th and 16th, both Whites made perfect scores, while both gasoline cars were penalized.

Won Quaker City Endurance Run

In this contest, held January 1st, 2d and 5th, the White vanquished 27 gasoline cars of 23 leading makes, winning the MacDonald & Campbell trophy.

Fastest Time in San Francisco Hill-Climb

Winning the free-for-all, the \$2,500 class and the \$3,500 class.

Fastest Time in the New York **Carnival Hill-Climb**

Making the ascent of Fort George hill in 321/3 seconds, compared with the best gasoline time of 36 seconds; largest entry list of any hill-climb ever held.

New San Francisco-Los Angeles

The White car made the 478-mile mountainous journey in 17 hours and 17 minutes, cutting 56 minutes from the previous

Double Victory in Harrisburg **Endurance Run**

The single White entry was the only touring car to make a perfect score, winning the principal 1908 trophy, the Board of Trade Cup, and also the 1907 prize in a "run-off" with last year's other perfect-score drivers.

Perfect Score in Detroit Endurance

Perfect Score in Baltimore Sealed **Mechanism Contest**

Two Perfect Scores in Kansas City Reliability Run

Digitized by Google



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche, Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BEEKMAN.

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

General Agents: The American News Co., New York City, and its branches.

ter Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address. "MOTORWORLD." NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 18, 1908.

Dealers Who are Deceiving Themselves.

If certain prophets are to be believed, there is a rod in pickle for not only the American Automobile Association, but for the misnamed Automobile Club of America and the National Association of Automobile Manufacturers.

The rod has been placed in the brine by "a dozen or more dealers" who, according to the seers, "have assumed the responsibility of racing and paid most of the bills, while the manufacturers have reaped most of the benefit." These men, according to the wiseacres, "declare that they do not intend to sit back, and have the manufacturers or the warring automobile organizations tell them whether they are to eat flesh, fish, or good red herring, but intend to do some of the ordering themselves."

In short, these "dozen or more dealers" mean to "take over the control of racing" if sanctions are withheld, or men are disqualified whom they think should not have been disqualified. It is a prospect sufficient to make any organization tremble. But if the "dozen or more dealers" have any real friends, the latter should take them aside and very earnestly whisper the word "Don't" into their ears.

What is wanted for the lasting good of the sport is not more trade influence, but less of it. The sport has been made so very much like a business that the genuine sportsman never has had a ghost of a chance. If this were not the case, the manufacturers and dealers who complain of the expensiveness of competition, now would have less cause for such complaint. What automobiling as a sport requires, is men who compete for love of the sport and not for the advertising there is in it; and the sooner the truth is realized, the better.

There is no room or justification for a trade controlled sport. There is no surer way of exciting suspicion and of killing it than by placing the government in the hands of men whose inspiring motive is self-interest. Undoubtedly there are not a few men on great newspapers, and others not so great, which receive the favors of "a dozen or more dealers" who will find it profitable to lend hope and cognizance to the latter; but the result is inevitable, though it may not become apparent until, as always is the case, their favors shrunken, the great papers drop the dealers and their cause, like so many squeezed lemons. It were well to remember that not so very many years ago these "great papers" devoted quite as much space to cycling as they now devote to automobile sport.

Electric Vehicles, Real and Unreal.

Electric vehicle mileage is not the vexed question it was at one time. Nevertheless it furnishes considerable food for thought and argument, and if not wisely treated tends to the development of types which are neither practical nor destined to prove a lasting credit to the trade. In short, the storage battery has been in general use for so long a time, and the science of electricity is so thoroughly explored that makers of electric vehicles are placed in a class which is pretty uniformly restricted as to its products, in that stress of competition and general enlightenment have combined to place its members on a pretty nearly even footing. That it is not the custom to build vehicles for very high mileage, or very high speeds, is, therefore, proof that such constructions are not economical in the broadest sense. Generally speaking, the radius

of the well-designed electric vehicle is sufficient for the service for which it is intended, while the possibility of changing batteries makes its extension easy where regularly scheduled routes are to be covered. The speed of this class of vehicle too, is all that is properly required for the city traffic, to which it is most properly suited.

This being the case, it follows that in such vehicles as are sometimes produced with certain specific recommendations of one sort or another, those qualities must have been attained at the expense of certain other, unenumerated factors, which are taken into consideration by the majority of makers. The result is that while the vehicle generally will come up to the performance predicted by its makers, it does not always prove as economical to run, or as durable, as others about which no such claim is made.

If the requirement of its owner is that of high speed, or great mileage, relatively speaking, then it may be such a vehicle will fit into his service in an economical way. Otherwise, the chances are that he will find the machine unduly expensive either to run or to maintain and that it will not prove a profitable investment to him.

It is well known that by the use of lightweight, single tube tires, thin plate batteries, and light carriage work, a very different performance in the matter of both mileage and speed may be obtained, from that obtainable with what may be termed the more standard types of vehicle. These methods are expensive, however. Thin battery plates are short lived, and liable to give way at any time under stress of excessive load, suddenly applied. Light tires, while reducing the vehicle resistance on the road and also the battery consumption, are not long lived, nor are they as proof against injury as those which are more commonly used. The evils due to light frame and body construction are equally patent in a vehicle which has seen service.

The point is that buyers of electric vehicles should consider carefully before purchasing, whether their requirements are those which are to be satisfied by the average representative electric, or whether they exceed its capabilities in any way. If they do, such a "special" type may prove advantageous. More likely, however, a vehicle of either the steam of gasolene types would serve to better advantage. The powers of the thoroughly reliable electric are pretty well defined. Progress in its development must be relatively slow, simply because the

field has been so thoroughly explored. Rational improvements are to be encouraged and are to be expected in no small number and significance. But the buyer without experience in this line, should beware of investing in constructions which are distinctively radical, or which are supported by "world-beating" claims.

The Matter of Tire Inflation.

To the average man who has been accustimed to thinking of pneumatic tires as either "hard" or "soft," and so, as either in suitable or unsuitable condition for use, it is a striking idea that the actual pressure to which any given tire should be inflated must relate largely to the construction of the tire-not in the sense of its resistance to blowouts due to excessive internal pressures, but to the relative durability of the rubber and fabric combination in withstanding the effects of repeated flexure. This, it appears, is the case with tires applied to heavy vehicles more particularly, as the use of very hard tires in such machines, throws a much heavier duty on the springs than it is absolutely essential they should carry. With the lighter vehicle, more resilience may be derived from the springs and less proportionately, from the tires. But even here, the degree of tire-inflation must be proportioned to the structure of the tire walls as well as to their strength.

The question which has been raised as to the effect of inflation pressures on the speed of racing cars, is likely to provide not a little enlightenment in the matter of the general requirements in regard to inflation. S. F. Edge, proved to his own satisfaction on the Brooklands Motordrome, that the speed of the car was but little influenced by variations in tire pressure. Supposing this to be absolutely so in a general way, the comfort of the touring motorist might be speedily increased to no small extent by the use of tires of comparatively low inflation, but capable of withstanding the effects of continued flexure.

Against these conclusions the results obtained on a dynamometer by Mr. Alex. Churchward, given in another column, appear to prove the reverse to be the case. Yet it is to be observed that his results were determined under conditions paralleling those of the perfect road, while the results of corresponding tests made on a highway were it possible to obtain them, might show less gain for the high inflation pressure, owing to its bounding action and the consequent loss of traction involved through

slipping of the wheels. Actually, of course, the amount of the traction resistance in proportion to the windage becomes so low at speeds above the normal that inflation pressures probably play but a small part in the total amount of power consumed, so that the variations involved are of comparatively slight moment. At moderate and low speeds, especially with light vehicles, it is of greater consequence. But even here the cost of power is sufficiently low so that the designer can afford to sacrifice something to the comfort of the passengers, if necessary.

The very evident conclusion is that lower inflation pressures than have been thought advisable hitherto may be used without serious loss, in any type of vehicle. The result will be less strain on the springs, less shock to the mechanism of the car and to the occupants, and longer life for both. Such a reduction must be subject to the dictum of the tire makers, however. For with a tire run partially "slack," the bending of the walls is greatly increased, and the strains in the structure are augmented proportionately. There is no doubt that the degree of hardness to which many tires are inflated renders them of no more comfort than a solid tire. Hence any possible advance in this direction must be counted a direct gain to the user.

One of our contemporaries which so regularly follows the lunch route that its contents usually are suggestive of "suds" and seafoam, has discovered that the word "or" in the Ostend rules, will permit six-cylinder cars, as well as four-cylinder ones—which are specifically named—to compete in the outlaw race for foreign cars in Georgia this Fall. It is hoped that the "discovery" will assist in relieving our contemporary from its awkward and painful effort to straddle and afford it an excuse for assuming the position it is so anxious to assume. It properly belongs on the anti-American side of the fence.

"In every sport that is conducted, the box office has something to say about its control."—Opinion credited to one of "a dozen or more automobile dealers."

Bosh! At any time the box office has anything to say about the control of sport, it is time for that sport to curl up and die. "Box office control" is the one sure way of befouling sport. It is the basis of practically all the fraud and fakery that ever is perpetrated.

COMING EVENTS

June 18, Washington, D. C.—Washington Lodge of Elks' race meet at Bennings track.

June 18, 19, Atlanta, Ga.—Fulton County Automobile Club's 382 miles sealed bonnet endurance contest to Macon and return.

June 19, Hartford, Conn.—Automobile Club of Hartford's gymkhana meet at Luna Park for benefit of Hartford Hospital.

June 20, Buffalo, N. Y.—Buffalo Country Club's annual gymkhana games.

June 20, Oakland, Cal.—California Woman's Automobile Club's endurance run to San Jose and return.

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Minneapolis, Minn.—Minneapolis Automobile Club's annual hill climb.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 3-4, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Pueblo, Col.—State Fair Association's meet at fair grounds track.

July 4, Glens Falls, N. Y.—25 miles stock car race at mile track.

July 4, Baltimore, Md.—Motor Car Racing Association's meet at Pimlico track.

July 4, Long Branch, N. J.—Elkwood Park Automobile Association's meet at Elkwood Park track.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 4, Lowell, Mass.—Lowell Automobile Club's 250 miles road race on Merrimac boulevard.

July 9, Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 15, St. Paul, Minn.—Automobile Club of St. Paul's meet at Hamline track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

January 16-23, New York City—Association of Licensed Automobile Manufacturers' annual show in Madison Square Garden.

DIVIDED HONORS ON PORTER HILL

Haupt Fastest in Cleveland Climbfest—Miller Captures Four Events—Woman Wins a "Championship."

If the title means anything, the Cleveland Automobile Club's annual hill climb, held on Porter hill, 23 miles from that city, on Saturday afternoon last, 13th inst., enabled Mrs. K. L. Otis to style herself the the finish. A ship's chronimeter is attached to the time recording device which registers the fractions of seconds in tenths.

Porter hill is considerably steeper than any of the former climbing grounds of the Cleveland motorists and there was some doubt as to the ability of some cars to climb it when the place was suggested. How little the critics of the course reckoned with the ability of present day automobiles to negotiate inclines was demonstrated when even the electric cars rolled up without any

caught the fancy of the crowd, Albert Miller received as much aplause, when he won four of the regular events and pushed Haupt hard in the free-for-all. The latter's time in the free-for-all was 42.9 seconds, and the record was made in a special trial a short while afterward. For general all-around efficiency as brought out in the piston displacement handicap the technical committee found that W. A. Bourke's Knox had carried off the honors; its time was 51.8 seconds. The summary:

Stock cars, \$850 and under—Won by L. E. Manley, Ford. Time, 128.3.

Stock runabouts, \$850 to \$1,250—Won by C. P. Brockway, Overland. Time, 1:17.3.

Stock touring cars, \$850 to \$1,250—Won by C. D. Paxon, Jackson. Time, 1:52.2.

Stock runabouts and roadsters, \$1,250 to \$2,000—Won by C. D. Paxon, Jackson. Time, 0:55.4.

Stock runabouts and roadsters, \$2,001 to \$3,000—Won by A. C. Miller, Stoddard-Dayton, 0:54:4; second, W. A. Bourke, Knox, 0:55.7; third, C. D. Paxon, Jackson, 0:56.4; fourth, A. C. Miller, Stoddard-Dayton, 0:59.2.

Stock touring cars, \$1,001 to \$3,000—Won by A. C. Miller, Stoddard-Dayton, 1:03.6; second, Andrew Aubel, Oldsmobile, 1:52.2.

Amateur championship Cuyahoga county—Won by Mrs. K. R. Otis, Stearns, 0:54.6; second, F. W. Work, Oldsmobile, 0:54.7.

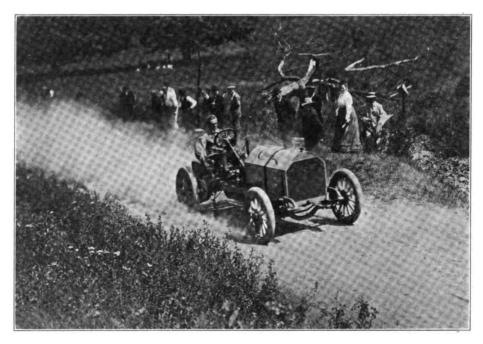
Electrics, \$2,000 and under—Won by W. F. Plistine, Columbus, 1:15; second, E.



A. C. MILLER (STODDARD-DAYTON) WINNING ONE OF HIS FOUR VICTORIES

amateur champion hill climber of Cuyahoga county. Driving a 40 horsepower roadster, she made the ascent in 543/5 seconds in the event labeled "championship." She was, of course, the feature of the day, but what would have been said of the club, in the event of accident, for permitting a woman to compete is another story. Mrs. Otis did not make the fastest time of the day, however, as William Haupt, of Philadelphia, who has been performing a great many hill climbing stunts this season, made the best time of the afternoon when he piloted his six cylinder car up the 16.9 per cent. grade in 36 seconds. The real honors of the day went to A. C. Miller, whose Stoddard-Dayton won four of the regular events and ran second to Haupt in the free-for-all.

Despite its distance from Cleveland, Porter hill attracted a fairly large gathering. Nearly 150 cars made the trip from the city and reinforced by more than a thousand countrymen from the surrounding district probably 2,000 people saw a long program decided. A new timing device, the invention of Walter C. Baker, of Cleveland, was tried with success. The instrument, which is similar in many details to a time recording clock, has its dial covered with paper, over which a fountain pen-like instrument traces a line, continuous except at the start and finish of a race. At the start the line jogs outward, then onward sharply, the change in course of the line being similar at



WILLIAM HAUPT (CHADWICE) MAKING THE FASTEST TIME

trouble and really made fast time, compared with the gasolene cars. The course was a little dusty, but in other respects ideal for the purpose. A long rolling road, stretching straight ahead for a clear half mile, made an excellent track for a hill climb.

While Haupt's work was nothing short of sensational, as he drove with a daring that

Gruenfeldt, Baker, 1:33.9; third, F. S. Peck, Babcock, 1:34.5.

Electrics, \$2,000 and over—Won by E. Gruenfeldt, Baker, 1:00.7.

Six cylinder stock cars—Won by William Haupt. Chadwick,, 0:41.

Stock cars weighing 1,432 to 2,204 pounds
—Won by A. C. Miller, Stoddard-Dayton,

0:46.8; second, W. A. Bourke, Knox, 0:51.1; third, C. D. Paxon, Jackson, 0:53.5.

Stock cars weighing over 2,204 pounds—Won by William Haupt, Chadwick, 0:41.2.

Piston displacement handicap—Won by W. A. Bourke, Knox; W. W. Partridge, Great Arrow; third, A. C. Miller, Stoddard-Dayton.

Free-for-all—Won by William Haupt, Chadwick, 0:42.9; second, A. C. Miller, Stoddard-Dayton, 0:45.7; third, C. D. Paxon, Jackson, 0:50.6; fourth, J. M. Watson, Corbin, 0:50.8; fifth, W. A. Bourke, Knox, 0:52.7.

Time trials for record—By William Haupt, Chadwick. Time, 0:36 (record for hill).

Columbus to Have a "Trouble Race."

Such sport as never has been seen before in Columbus, O., is promised in the automobile races to be run at the festival of the Eagles in the Driving Park there on June 19th. They will be in charge of the Columbus Automobile Club, and the principal event will be a 100 miles race for stripped catalog stock cars, open to local owners or drivers. A city championship is another of the events; but the one that probably will create most enjoyment will be what is termed a "trouble race" of 11/4 miles for five-passenger touring cars, each to carry observer, driver and three passengers. The cars will be started at the three-quarter pole, with a box of sand attached to each, run to the wire, detach the box, run to the firstquarter pole, change the inner tube or tire complete on the rear wheel, run to the second-quarter pole, stop the engine, passengers and driver dismount, run to the thirdquarter pole, light all five lamps and finish with all lights burning. Demountable rims and electric lights will be barred and the tires must be inflated with a hand pump.

Cash Prizes for St. Paul Meet.

Several noted drivers and cars are expected to take part in the St. Paul Automobile Club's meet at the Hamline track, St. Paul, on Wednesday, July 15th. In addition to the trophies for each of the six events there is to be a cash prize for each race with the exception of the club championship. The program is: Five miles, stock chasses of 60 horsepower and under; prizes, a silver cup and \$100. One mile, flying start; one mile track record, silver cup and \$200. Twin City championship, five miles, for fully equipped stock cars, Minneapolis and St. Paul club to each nominate one car: the Twin City championship cup to go to winning club and gold watch fob to winning driver. Five mile match for professional drivers and racing cars, flying start, best two out of three five-mile heats, with not more than two cars in a heat: silver cup and \$150 to winner. Ten miles handicap, silver cup and \$100. Twenty-five miles, stock chasses of 60 horsepower and under; silver cup and \$150 to winner, and silver cup for second place.

SIMONS WINS KANSAS CITY PRIZE

Decision on the Run-Off Reached by Review of Records—Particulars of the Several Scores.

It has now been decided that Carl J. Simons, Oldsmobile, won the run-off of the tie in the Kansas City Automobile Club's endurance which was held on June 9th. The original run was held on May 16th, but as 17 cars finished with perfect scores it was decided to make the perfect scorers run the contest over again to decide the winners of three cups. As stated in last week's Motor World, the tie was run on Saturday, 9th inst., but it was not until several days later that the scores were announced. After a careful review of the cards the committee has announced that Simons wins with a score of 840 points out of a possible 1,000. F. F. D. Morairity, Stevens-Duryea, was second with 795; W. S. Hathaway, Maxwell, third with 770, and H. Holzhauer, Pope-Hartford, fourth with 696. The scores of the other four cars to finish are low, a brief summary of the particulars upon which the relative standing of the cars was based being as follows:

H. E. Rooklidge, White—Vaporizer replaced, boiler feed stopped up, seals broken, damaged wheel and fender, time, engine stopped; penalty, 795 points; score, 205.

F. D. Moriarty, Stevens-Duryea—Broken radiator seal, both rear fenders broken, one rear spring flat, time; penalty, 205; score, 795.

Carl J. Simons, Oldsmobile—Broken radiator seal, rear axle sprung, behind schedule; penalty, 160; score, 840.

Roy Sanborn, Stanley—Fusible plug blown out, stop for gasolene, behind schedule; penalty, over 1,000.

H. Holzhauer, Pope-Hartford—Bonnet seal broken, damaged fender, behind schedule; penalty, 304; score, 696.

W. S. Hathaway, Maxwell—Bent steering knuckle replaced, radiator seal broken, front axle sprung, behind schedule; penalty, 230; score, 770.

M. C. Nolan, Stevens-Duryea—Ignition adjustments, all seals broken, motor dead 52 miutes, fan belt repaired, one rear spring flat, front fender loose, behind schedule; penalty, 825; score, 175.

W. M. Goodrich, Studebaker—Missing motor, pump attached to force gas to carburetter, loose spokes in rear wheel, replaced spark plugs, broken radiator seal, behind schedule; penalty, 988; score, 12.

Colorado Schedules a Strenuous Run.

As the earth's surface in Colorado is not quite as level and smooth as is to be found in some other places the 500 miles sealed bonnet reliability run to be held in northern Colorado July 2, 3 and 4, is likely to prove the most strenuous contest of the

sort ever held. The first day's run from Denver to Fort Morgan and return is over picturesque but rocky and uncertain roads, and it is expected that many cars will fall by the wayside on that portion of the run. The route on the second day is from Denver to Fort Collins, Greeley, Boulder, returning to Denver, while the final day will take the contestants to Colorado Springs and return. All adjustable parts will be sealed, and no adjustments or replacements. however trifling, will be permitted. Different schedules will be arranged for the different powered cars and being late or early at any of the controls will result in a debit of three points for every minute. The rules have been made so exacting that the promoters do not expect that any cars will finish with perfect scores, but they aver that it, will prove the most exhaustive test of motor cars ever witnessed by the people of that section.

Savannah Secedes to Get a Race.

The Savannah (Ga.) Automobile Club, which wants a road race so badly and doesn't care how it gets it, has completed its pitiable somersault by resigning from the American Automobile Association in order to assist the disgruntled Automobile Club of America in conducting a road race for foreign cars on American soil. The A. C. A. had one other spasm of delight late last week, apparently due to a "hoax." According to its press bureau, it received a telegram asking for an entry blank and stating that an Acme 6-cylinder car would be entered for its Hessian race, the inference being that the message came from the Acme Motor Car Co., who, unfortunately promptly repudiated it. Whether it was the Savannah club's action or the alleged telegram that caused it, it is certain that "Bobby" Morrell, the A. C. A. chief bandagewearer, "Baron" Schwarzkoff, who carried Europe on his shoulders for several years and who recently distributed broadcast postal portraits of himself—he has won 7 fourth prizes at beauty shows-and several other unusual Americans, joined in a dinner of mutual admiration at Hotel Astor.

Endurance Run to Precede a Carnival.

An "invitation endurance run" from Philadelphia to Wildwood, N. J., will raise the curtain to the Fourth of July meet of the Motor Club of Wildwood. The endurance run will take place on July 3d and that night there will be an illuminated automobile show on the boardwalk. A decorated parade will be the feature of the next morning and in the afternoon the straightaway races will be held on the Central avenue boulevard. Nine events at one mile have been programmed, as follows: Gasolene cars selling under \$1,250; gasolene cars selling from \$1,251 to \$2,000; gasolene cars from \$2.001 to \$3.000; gasolene cars from \$3,001 to \$4,000; four cylinder cars selling above \$4.000; six cylinder stock cars; free-for-all: steam stock cars only, and time trials.

KEPT 6000 SPECTATORS GUESSING

Half Century Event at Point Breeze Won by Frease—Other Spirited Features of a Successful Meet.

With perfect weather, good management, the presence of 6,000 enthusiastic spectators, and spirited racing, the Quaker City Motor Club's meet at the Point Breeze track, Philadelphia, Saturday afternoon last, 13th inst., was a big success in spite of the supposedly unlucky day of the month. By reason of its large number of starters—fourteen—the 50 miles stock car race was the feature event of the day and the race was so contested that the winner was not apparent until within a few miles of the finish

It was the last event on the program and the excitement began when the starter gave the pistol to the 14 drivers. The field got away in a bunch and it was nothing short of miraculous that they got around the first two turns without accident. On the back stretch of the first mile Robert Morton, Pullman, jumped into the lead and with the others strung behind him came down the stretch for the first time. Wallace H. Owen, American, was close behind and this order continued for eight miles when tire trouble caused Morton to slow up and Owen took the lead. It did not take Morton long to get a new tire and then he went after Owen, who had been plugging away in front. Owen headed the procession for 25 miles before Morton cut down the lead and passed amid cheers from the grandstand. His lead was short-lived, however, for in the 28th mile he was obliged to leave the track again, and Edwin H. Frease, Autocar, who had been jogging along at a steady pace all the while nosed to the front. After that Frease was never headed but the race was exciting from the fact that the others made a valiant effort to overhaul him, while at the same time, J. F. Brown, in another Autocar, had been hammering at the remainder of the field with such good effect that he finally landed in second position. Perhaps the most consistent race of all was driven by Frank Yerger, Studebaker, who was looked upon as a likely winner until a puncture temporarily put him out of the running in the 46th mile.

The meet was started at half-past one o'clock, with two events for little cars, and the first, at one mile, drew three contenders, a Buick, with Wilkie at the helm; a Maxwell, driven by David, and a Ford, with Graham up. Wilkie captured the cup and also got the next event, at three miles.

The third race brought out the higherpowered cars and Jack Harkin, Thomas-Detroit, looked a sure winner until the fourth mile, when Morton snatched the lead from him; another Pullman, driven by C. B. Kirkham, slid in for second place. Only two cars started in the next race for touring cars and William Fritag's Mitchell beat David's Maxwell. In a special event for Autocars John Archfield ran three miles in four minutes flat, defeating Brown and Frease, in this order, by a narrow margin.

After this Leonard Zengle made his appearance with his Pennsylvania car and had a lot of fun in the fifth race. Zengle, Owen (American), and Van Tine (Garford), were scheduled to go five miles, but after three ineffectual attempts to get a flying start, Owen withdrew and let Zengle and Van Tine fight it out. The former won the event easily.

The last event before the half century was put on was at 10 miles for high-priced cars and it developed into a match between Charles Howard, Thomas Flyer, and Wally Owen, American. The Garford car ran all right for eight miles, but a puncture put a stop to it. Up to that time the race was the best of the meet, as shown by the slight difference in time at the finish. The Thomas won by two-fifths of a second. "Wally" Owen was particularly unfortunate. After getting through the meet without accident he broke his wrist in two places while cranking his car preparatory to starting for home. The engine kicked and the crank did the rest. The summaries:

One mile for stock runabouts, \$850 or under—Won by Edward Wilkie, Buick; second, J. F. Graham, Ford; third, William N. Davids, Maxwell. Times, 1:34, 1:373/5, 1:443/6.

Three miles for stock cars, \$850 to \$1,250—Won by Edward Wilkie, Buick; second, William Fritag, Mitchell. Times, 4:241/5 and 5:011/5.

Five miles for stock cars, \$2,001 to \$3,000—Won by Robert Morton, Pullman; second, C. B. Kirkham, Pullman; third, Jack Harkin, Thomas-Detroit. Time, 6:17.

Five miles for stock touring cars, \$1,251 to \$2,000—Won by William Fritag, Mitchell; second, William David, Maxwell. Time, 7:21.

Five miles match—Won by Len Zengle, Pennsylvania: second, A. G. Van Tine, Garford. Time, 6:27.

Ten miles stock cars, \$2,001 to \$3,000.— Won by Robert Morton, Pullman; second, C. B. Kirkham, Pullman; third, J. F. Brown. Autocar. Time, 12:2734.

Ten miles, stock cars, \$4.001 or over—Won by Charles Howard, Thomas Flyer; second, Wallace Owen, American. Times, 12:00% and 12:00%.

Fifty miles free-for-all stock cars—Won by E. H. Frease, Autocar; second, J. F. Brown, Autocar; third, Frank Yerger, Studebaker; fourth, Wallace Owen, American. Time, 1:06:51.

One mile time trials—Won by Len Zengle, Pennsylvania, 1:10; second, Charles Howard, Thomas Flyer, 1:16; third, A. G. Van Tine, Garford, 1:18.

Three miles special for Autocars—Won by John Archfield; second, Jos. Brown; third, E. H. Frease. Time, 4:00.

FIGHTING THE RHODE ISLAND LAW

Question of Constitutionality Taken to the Supreme Court—Right to Impose Graded Tax the Main Issue.

The right of the State of Rhode Island to impose upon automobile owners an annual tax graded by the horsepower of their machines is the main point at issue in a case now before the Supreme Court of the State, whereby the constitutionality of the recently enacted law is to be tested. This case was made up by the refusal of Jefferson K. Crafford to pay a fee of \$15 for the registration of a car which he bought on June 9th, and his consequent failure to secure registration. Then, through Walter H. Barney, a petition for a writ of mandamus was filed with the Supreme Court. Crafford is chauffeur for William Penn Mather, president of the Rhode Island Automobile Club, and his proceedings in this instance are practically the result of action taken at a meeting of the board of governors of the club, on advice of the laws committee to contest the new law on the ground of nonconstitutionality.

Crafford's petition for a writ of mandamus requiring the State Board of Public Roads to receive his statement and grant registration for his machine, says in part:

"That the refusal of said boar I to receive said statement from your petitioner or to register said motor vehicle to assign a distinguishing number or mark or to issue to your petitioner a certificate of registration of said vehicle unless and until a fee of \$15 is paid, as by said board demanded, is unlawful for the following reasons, viz.:

"1. There is no law requiring such a payment and a prerequisite to the filing of said statement the register of said vehicle, the assigning of a distinguishing number or mark and to the issuing of a certificate of registration, as requested by your petitioner of said board as aforesaid.

"2. The provision of said section 8 of said chapter 1592, insofar as the same requires the payment of certain fees graded in accordance with certain classifications of motor vehicles by horsepower as therein set forth for the certificates provided for by section 2 of said chapter 1592 of the Public Laws, are unconstitutional and in violation of the provisions of section 2 of article 1 of the Constitution of Rhode Island and Providence Plantations.

"3. That said provisions of said section 8 of said chapter 1592 are unconstitutional and in violation of the provisions of section 16 of article 1 of the Constitution of Rhode Island and Providence Plantations.

"4. That said provisions of said' section 8 of said chapter 1592 are unconstitutional and in violation of article 5 of Amendments to the Constitution of the United States of America.

"5. That said provisions of said section 8 of said chapter 1592 are unconstitutional and in violation of section 1 of article 14 of the amendments to the Constitution of the United States of America.

"Wherefore your petitioner most humbly prays for this Honorable Court to issue a writ of mandamus out of and under its seal, requiring and enjoining the said John F. Richmond, William C. Peckham, Frederick E. Perkins, Robert B. Treat and John H. Edwards, as they are members of and the State Board of Public Roads, to forthwith receive from your petitioner said statement and file the same, and to register said motor vehicle and assign to it a distinguishing number or mark and to issue a certificate of such registration to your petitioner; and that such further order may be made in the premises as justice may require and to your honors may seem meet. And so your petitioner will ever pray."

African Explorer Delayed in a Desert.

Two hundred and ninety days is the present African transcontinental automobile record. It was established on May 26th, when Lieutenant Graetz, of the Prussian army, reached Serenje, Rhodesia, practically completing his journey from Dar-es-Salaam, German East Africa, whence he departed on August 10th last. When last heard from, the lieutenant had just succeeded in crossing an arid desert in order to accomplish which, he had been forced to eke out his supply of cooling water with a ration of cold tea, reserved for his own consumption and that of his party. According to the meager despatch which heralds his arrival at his journey's end, a full month of the period which has elapsed since he was reported, was consumed while the expedition was marooned in the desert owing to a gasolene famine. He was obliged to send a native guide to Serenje for more fuel. The car employed for the trip was of special construction, its most noticeable features being its enormous wheels and tires. The fuel tankage was sufficient to supply the 45 horsepower motor for 600 average miles. The party consisted of the lieutenant, a machinist and a native servant.

Improving Jacob's Ladder and Mowry Hill.

"Iacob's Ladder," and Mowry Hill, the Berkshire twin terrors of automobilists, are soon to be reduced to the quiet dignity of ordinary and unobtrusive hills. finally having been raised by automobile clubs or donated by hotel keepers, a contractor has been engaged to alter the fameas hills which lie between Springfield and Pittsfield, Mass. Last Friday, the 5th inst., the work began, the roadway is being widened by dynamiting the rocks which are on either side; other rocks are being dug away, and the roadbed will be regraveled and drained, and ditches filled up. It is thought that the work can be done in two weeks, after which the road will be safe for tourists.

BIG QUESTIONS IN LITTLE COURTS

Curious Rulings by a Larchmont Justice— Novel Point of Law Raised in Proceedings at Jamaica.

Despite the fact that there is no speed limit in Larchmont, N. Y., an automobilist has been fined \$25 for exceeding it. Just how this remarkable judicial decision was reached, will be determined by a higher court to which an appeal has been taken.

The point was raised when J. R. Johnson, Jr., who had been arrested and charged with exceeding the speed limit, was arraigned before Justice of the Peace O. Ernst, which latter, when not in the judicial ermine dons the spotless white jacket and apron of a suburban dentist, for such he is. At the trial, Johnson's counsel, Mr. Olvany, who is the attorney for the Association of Motor Car Owners-of which association the prisoner is a member—requested a copy of the township ordinance regulating the speed limit of automobiles. The court admitted that there was no such ordinance in existance. All this time the prisoner stood charged with "exceeding the speed limit over a marked course in the village of Larchmont,"

The defendant's attorney then moved for his client's discharge and delicately intimated that it would be rather difficult to break a law which did not exist. "Overruled," said the court.

As there was no court stenographer, the defendant furnished one who qualified and was sworn in; then the case proceeded. The evidence showed that a constable timed the automobile in question over a course which he admitted he had not measured, and therefore was not legally qualified to give evidence as to its length.

"I object to constable's testimony," said defendant. "Overruled," said the court.

The court then permitted the constable to be represented by private counsel, against the objection of the defense, who pointed out that such counsel had no legal standing and should not rightfully be permitted to cross examine. Regardless of citation from higher courts and the law in general, every objection was overruled and exception taken by the defense for the purpose of appealing the case, which appeal will be taken immediately.

The fine was \$25, which was paid under protest at the time. The Association of Motor Car Owners is going to make this a test case, as it is asserted the practice of justices of the peace in townships and villages of New York State in arresting and finding automobilists without any justification or legal status is becoming a serious menace to the automobile public.

Another case in which the New York motor vehicle law is involved, came up last week in the court of Special Sessions of Jamaica, L. I. Harry Chandler, a chaufeur employed by X. P. Huddy—the New York lawyer who is conducting the Johnston case in New Jersey, which is to test the constitutionality of the Frelinghuysen laws—raised a novel point when his case was called. Chandler filed a demurrer in which he contended that the court had no jurisdiction in disposing of his case. He had been arrested and charged with having violated the speed limit provision of the State motor vehicle law.

In his demurrer Chandler asked the court to dismiss the complaint against him on the ground that there is no State law regulating the speed limit for motor vehicles, for the violation of which he was on trial. He contended that the magistrate has no power to conduct a preliminary hearing for the purpose of holding the defendant for the Court of Special Sessions. He also declares that no section of the law can be repealed or altered unless a repeal section is included. He says that in 1902 a law was passed making it unlawful to operate automobiles at a speed greater than eight miles an hour in the city limits and 20 miles an hour outside the city.

In May, 1903, a new law was passed, but the Penal Code was not referred to and no special mention made to repeal any specific section. In 1904 another act was passed, but again the code was not referred to. Chandler also says that under the charter the Court of Special Sessions can deal with cases only where the fine would be \$50 or less, and that it has no jurisdiction in the case of a misdemeanor, where a larger fine can be imposed. The case was adjourned until June 16 in order to give the District Attorney time to look up the law on the matter.

New Jersey to Improve Bergen Roads.

Great improvement, some of it much needed, is to be made in the roads of Bergen county, New Jersey. The State road department has recently agreed to pay its share for the rehabilitation of the Paterson plank road, and last week the State road commissioner, Colonel Frederick Gilkyson, approved the Fort Lee Hill road, where automobile accident after accident has occurred. A stone wall interferes with the view on a bad turn and the State improvement ideas contemplate changing this and reducing the grade, as well as purchasing the gore where the bad turn is, thus making a good road out of what now is a death trap.

The State Department last week also approved plans for Haworth's drive, thus connecting the old Schrallemburg road to Westwood, Aetna and other places. One of the difficulties with Bergen county roads is that they all run north and south, and none of them east and west. This the commission intends to rectify so that one will not have to go to Jersey City to get across the county or to Hackensack on the further north side of the county.



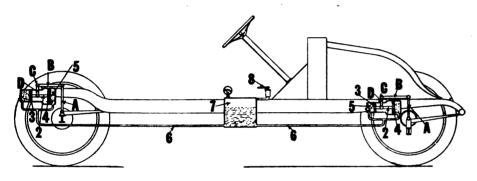
HYDRAULIC SUSPENSION SYSTEM

Radical Idea Applied in Device for Adjustment to Road Conditions—Control of Supports at Operator's Will.

Probably every one who has at any time considered the methods of suspension employed in motor cars has longed for a system by which it would be possible to alter the relative strength of the support to conform to existing road conditions. Were this possible, a car might be driven over rough and smooth roads with equal oscillation, by merely altering the adjustment of the supporting system. Another feature which is readily recognized as desirable is the corelation of the supports for the front and rear ends of the vehicle such that the rocking of the chassis from end to end

part of the system must be accompanied by a very slight corresponding movement in each of the other elements, subject, however, to the compressibility of the air in the main receiver.

In action, when a wheel strikes an obstacle in the road and the axle is raised, the movement is communicated through the linkage above described to the pistons, 3 and 4. The movement on the direct plunge of the chassis is such that the compression movement set up in the cylinders takes place in the larger of the two, and is partly counteracted by the displacement of the liquid contents of the group into the smaller cylinder. The capacity of this member being relatively small, however, a certain amount of liquid is driven back through the piping into the central reservoir. The increase in pressure thus developed, is, of course, imparted to each of the other sets of pistons and cylinders, all four of which are exactly alike.



would be obviated. Both of these points are covered, theoretically at least, in a recent invention which has been patented in France by Louis Renault. It is a hydraulic system, in which all four supports of the chassis are controlled from a central reservoir in which the pressure may be varied at the will of the operator.

The method of arranging the organs of the system will be seen from the accompanying illustration in which A is a link attached to the axle and connecting with a rocker arm, B, which oscillates about a pivot point, C, on the frame. The rocker is really a sort of bell-crank lever, having a second arm, D, which is connected at its lower extremity with a piston rod, 2. This member serves as a connecting medium between two differential pistons, 3 and 4, which are free to move in the cylinders, 5, which also are fixed to the frame. The cylinders are piped through the leads, 6-6, to the central reservoir, 7, which is equipped with a pressure gauge and a pressure pump, 8.

The system is partially filled with some suitable liquid when in use, the level being such that the cylinders, and piping are filled, while a portion of the central reservoir is left free for the pneumatic head on which the balance and cushioning action of the arrangement depends. By this means, the pressures throughout the system are equalized, while any piston movement in one

When the wheel has crossed the obstruction and the axle tends to resume its normal position with relation to the chassis, the differential effect again comes into play to check the rebound, since in order to fill the space behind the larger piston a relatively great amount of liquid must be supplied, and because a certain portion of this must be driven out of the smaller cylinder by its piston. In this connection, it is seen that by regulating the flow through the cylinder ports, any desired amount of piston retardation may be effected. The relative resiliency of the system, naturally depends upon the air pressure in the central reservoir which, as it is regulable, may be altered to suit the conditions of the highway, and in a manner at once simple and conve-

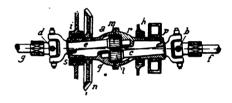
With the elimination of all springs in favor of compressed air, a gain is secured in resiliency, with a corresponding loss of the uncertainty attendant on the performance of all the mechanism involving the use of springs. The idea is decidedly appealing, especially since it provides for a degree of harmony between the supports of the front and rear ends of the machine which is entirely lacking from the suspensions in ordinary use. It is so very radical, however, that considerable demonstration of its properties will doubtless be required before it can be accepted by the public.

DIFFERENTIAL MINUS THE HOLER

New Adaptation of the Spur Gear Principle
—Simple Method for Securing the
Balancing Relation.

So common have the two most familiar types of differential gearing become, that there is a tendency to assume that possibilities in the line of a suitable balance gear for automobile use have been exhausted with the confirmation of the bevel and spur gear patterns. That such is not the case, however, is shown by the development of a new adaptation of the spur gear principle, which has lately been introduced abroad, and which is interesting for this reason, if for no other.

By the use of stub shafts which are slightly inclined instead of being parallel to the axle as is generally the case, the use of an idler has been dispensed with and the balancing relation secured by means of



two plain spur pinions on the ends of the shafts. In order to secure this simplification, however, the designer has been forced to employ two sets of universal joints in order to correct for the disalignment of the stub shafts. But by throwing the centers of the joints into the center line of the axle, the amount of joint motion has been reduced to a minimum.

The method of arrangement is illustrated in the accompanying drawings, from which it will be seen that the differential housing, a, encases the two stub shafts, c and e, which are connected to the driving axles proper at g and f, through the universal joints, b and d. The two pinions, m, l, furnish the compensating connection for the group.

Motion is supplied through the usual bevel gear, n, the turning moment actually transmitted evidently being proportional to the radius of gyration of the pinions about the center of the housing. The group is supported on ball bearings at h and i, while the brake drum is shown at p.

The system, which has been designed by M. G. Coccoti, is especially adaptible to light and low powered vehicles, and is particularly meritorious in regard to its small number of parts and their simple construction. As to its working efficiency, there would seem to be some question as to whether the gain secured by dispensing with the usual number of pinions is not more than counteracted by loss through motion in the universal joints.

GROWTH OF MOTOR CAB SERVICE

Its Popularity in British Cities—The Mistake of Over-Powered Vehicles Pointed Out by a French Observer.

Leading the United States by a year and more in its adoption of the taximeter for motor vehicle use, and so of the taximeter cab, an amount of business has been built up in England which, even at the present time is amazingly large, notwithstanding the rapid increase in the employment of similar vehicles here. Nearly 1,000 taxicabs are now in use in London alone, and others have been ordered, while in the other larger cities of England a constantly increasing number of such vehicles is being put into service.

"It is only two years since the cab drivers were masters of the London streets," remarks Yves Guédon in La France Automobile. "They levied toll according to their own good pleasure, and the Englishmen, who have no love for argument paid them, grumblingly.

"But the times have indeed changed since then. The 'taxi-auto' has arrived and has modified profoundly the habits of the men of affairs of the English metropolis. The automobile fiacres—taxicabs, as the English have christened them—indicate exactly the amount which is to be paid, eliminating all exaggeration on the part of the chauffeur. The tariff is higher, but thanks to their speed, the taxicab trips become frequently less dear than those taken in cabs, and the Englishman is so chary of his time that for him this represents considerable money, which adds largely to their value.

"Under such circumstances the 'taxiautos' rapidly became popularized in the English metropolis and now the red Renaults and the blue Unics are as familiar in London as in Paris.

"The first serious enterprise in the way of London motor cab service, dates back some 15 months. It is that of the General Motorcab Co., which is directed by the administrators of one of the great Parisian companies. Up to the first of last November it possessed 506 Renault taxicabs, precisely similar to the Parisian type."

There are now in London no less than eight taxicab companies, and still another is in process of formation, as he explains. These are: The General Motorcab Co., United Motorcab Co., Metropolitan Motorcab Co., F. I. A. T. Motorcab Co., Express Motorcab Co., London Motorcab Co., Carlton Garage, and the London Improved Cab Co. On the first of April, last, there were 958 taxi-automobiles in service on the London streets, divided among 12 different marks, as follows: 8-9 horsepower Renault, 643; 12-14 Darracq, 50; 14-16 Ballot. 17; 14-16 Rational, 12; 12-14 Argyle. 12; 10-12 Marples, 5; 10-12 Simplex, 4; 10-12 Humber, 2;

14-16 Thames, 1. Of these, the Renault, Marples and Simplex vehicles are equipped with two-cylinder motors, the Unic and Humbers with three-cylinder motors, and the remainder with motors of the four-cylinder pattern. Within some months the number will be increased by 500 new Renault machines which have been ordered already.

"The taxi-autos have not been slow in scattering over the United Kingdom as well," continues the above authority. "It should be remembered that besides London, England possesses innumerable cities and resorts, frequented from one year's end to another with a select population among which the automobile cabs have every opportunity of thriving.

"There are already 33 at Brighton; 22 at Liverpool, where one new company has just been established within a few days; 12 at Eastbourne, 6 at Bradford, 4 at Portsmouth, where there will be no less than 50 within a few weeks; 4 at Birmingham, 3 at Chester, 2 at Edinburgh, and 1 at Nottingham. In all these centers the companies have only just organized, with a minimum number of vehicles in service, but these will be augmented sensibly little by little. . . .

"The tariffs, though high enough, often are inferior to those which have been applied wrongfully and persistently by the 'cabbies.' In London, for instance, the rates begin at 8 pence (16 cents) for the first mile, with 2 pence (4 cents) for each succeeding quarter mile, and 2 pence for each 21/2 minutes or fraction thereof when the cab it standing. At Edinburgh the tariff is 1 shilling (24 cents) for all trips of less than a mile or of a duration of 10 minutes, and 2 pence for each addition of a quarter of a mile. At Eastbourne the charge for the first mile is similarly 1 shilling, with $6\frac{1}{2}$ pence (13 cents) for each succeeding half mile, and a similar amount for each 71/2 minutes' delay. In other localities an attempt has been made to adopt the tariff of the horse-drawn vehicles, but these systems have not been in service a sufficient length of time to permit of judging successfully their monetary results.

"In London where the taximeters have already had 15 months service, the exploitation is developing profitably, even beyond the expectations of its promoters. When the first company, the General Motorcab Co., was created in 1906, the probable daily receipts were estimated at \$9. In March, 1907, with only 45 machines, the average receipts had increased already to \$10 and They have remained somewhere around these two figures, and even increased during the four months of the London 'season,' which lasts from May to the end of July, to \$14 and \$16 a day. Adding that fuel and tires are cheap in England. the rapid extension of taxicab service among our neighbors across the Channel will not be surprising. There are fraudulent practices among the chauffeurs, to be sure, but they are not of sufficient importance to hinder the extension of the service.

"After Paris, London, Berlin and New York, have known the taxi-autos and have exploited them, as the public approves of their services which are beginning to be active in the affairs of the business man and, as in the century in which we live, time is becoming more precious than ever, the taxi-autos will not delay in spreading to all the large settlements and their environs.

"The experience of Paris has not been of much profit to the taxicab enterprises of London. In Paris, a city where traction is very poor, we already have made the mistake of employing machines with 10 to 15 horsepower motors of 2 and 4 cylinders, when the single cylinder motors of the 8 horsepower De Dion-Bouton type would have sufficed. In London the mistake is being continued and even aggravated. Motors of 6 horsepower would be sufficient in the ideal city with level roads, wide and well kept. Yet everywhere, even on the cabs of French manufacture, which are in the majority over those of English construction, they have installed motors of 10, 12, 14 and even 16 horsepower, of 2, 3 and 4 cylinders, making them necessarily more heavy, more costly in the matter of fuel consumption and mechanical upkeep as well as tires.

"When therefore, will our contractors of Paris and London settle upon the monocylindric motor of somewhere about 8 horsepower, which alone will assure economy in their service?"

Originality in Compression Release.

An ingenious application of the principle of the automatic inlet valve has been utilized in the reverse sense in a pet cock intended to be used for starting purposes, and recently introduced on the foreign market. Entirely supplementary to the hand-actuated cock which is employed to release the compression when swinging over the motor prior to starting, is a spring retained valve, which is adjusted to release at a predetermined pressure. At the same time this valve always is sealed with respect to the effects of suction. In consequence, though the required compression release is obtained at the point in the cycle where it is necessary, the suction stroke is carried out without any weakening of the charge due to the admission of air through the pet cock, such as occurs with the ordinary type of plain cock, or with some methods of pressure release by means of the exhaust valves, in which the latter are held open during the entire cycle.

By adjusting the spring it is possible to secure the release at any point desired, thus ensuring sufficient compression to guarantee an effective starting impulse without creating too great a drag on the starting crank. At the same time, the fact that the piston invariably inducts charges of normal constituency makes easy starting an assured fact, regardless of speed of cranking.



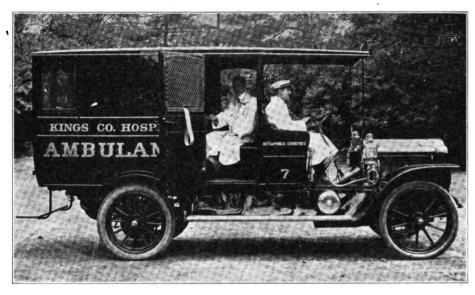
IDEAL AMBULANCE CONDITIONS

Ease and Protection for the Sufferer in New Automobile Type—Larger Capacity for Relief Service.

That the automobile is the best vehicle for hospital ambulance work is generally conceded, and although there are many and varied types of the automobile ambulance in operation quite the latest development in of rubber tires for fire department work, is the fact that they do not cut the hose as engines, trucks, etc., arriving late at the scene of any fire, drive over the lines that have been laid.

Nebraskan Owners Multiplying Fast.

Automobile agents in the State of Nebraska are dispensing machines at the average rate of ten a day, judging from the report of the Secretary of State in the matter of new licenses taken out during the



AUTOMOBILE AMBULANCE OF KINGS COUNTY (N. Y.) HOSPITAL

this direction is the vehicle that has just been constructed for the Kings County (N. Y.) Hospital, by the White company, Cleveland. As shown in the accompanying cuts a departure has been made by having a side door entrance for the surgeon, where he may sit at the head of the patient instead of at the foot, as in most ambulances. The advantage of this arrangement may be readily realized. The crowning feature of this new ambulance, however, is its great size, and the double-deck arrangement of the cots, which is so well worked out that any one of them may be folded out of the way and yet in extreme cases it would be able to convey six or even more persons to the hospital at one time. The value of this feature in large communities where at times the ambulance is in prequent requisition is obvious. Both the top and the bottom cots are on rollers, so that they may be moved without any jar to the patient.

Rubber Tires for Fire Department.

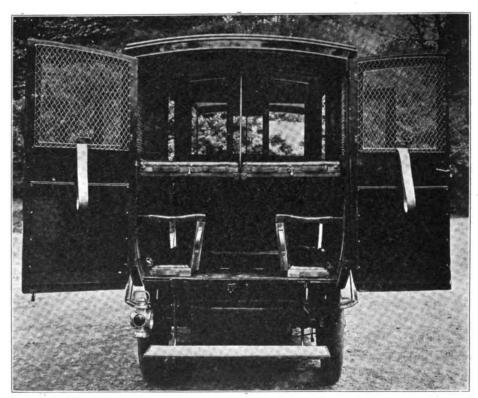
For the Fire Department of New York City, the Diamond Rubber Co. received in May, an order for 14,000 pounds of solid rubber tires. To this order, 12,000 pounds additional were added on June 10, making a total of 26,000 pounds of rubber the Diamond company is to furnish for the fire department's equipment for the coming year. The tires are of the internal wire and side wire type, and cover a great variety of sizes. A strong argument for the use

WHEEL DIAMETER AND TRACTION

Tests Showing Astonishing Gain in Favor of the High Wheel—Requirements of Farm Vehicles Defined.

It is commonly understood, in accordance with the accepted theory on the matter, that the tractive effort required to draw a given load at a stated speed over a certain stretch of highway decreases as the diameter of the wheels is increased. But that the difference may amount to as much as a 21 per cent. reduction in the power requirement where 28 and 55 inch rear wheels are compared, with front wheels of correspondingly smaller preportions, is not generally appreciated. Yet such is the case. as was proved by a series of experiments carried out at the Columbia (Mo.) Agricultural Experiment station. The tests were applied to an ordinary farm wagon, and apply directly to animal drawn vehicles intended for farm work. The points made in relation to wheel diameters, however, are of general interest to the motor vehicle designer, while certain other of the observations are instructive as suggesting the requirements of motor vehicles destined to find a place in the extensive field of agricultural machinery.

According to a summary of Bulletin No.



INTERIOR VIEW SHOWING DOUBLE DECKED ARRANGEMENT OF COTS

month of May. The total receipts from this source during the month amounted to exactly \$354.20, and as the individual fee is \$1, the average is fairly easy to compute.

52, of the institution mentioned, the draft required in each case, was determined by means of a Giddings self-recording dynamometer. The net load, which was uniform

throughout the tests, was 2,000 pounds. Tests were carried out with three sets of wheels, all having tires 6 inches wide. Those known as the standard were of 44 inch diameter in front and 55 inches in the rear; the medium wheels were 36 and 40 inches in diameter, respectively, while the low wheels were 24 and 28 inches in diameter, respectively.

The general conclusions reached were: That for the same load, wagons with wheels of standard height drew lighter, or in other words, required less tractive effort, than those with lower wheels. The difference in favor of the standard wheels was greater on road surfaces in bad condition than on good road surfaces, and it was also observed that low wheels cut deeper ruts than those of standard height. That for most purposes wagons with low wheels are more convenient than those of standard height, particularly since wagons with broad tires and wheels of the standard dimensions are more cumbersome and require a greater amount of room in turning.

Diminishing the height of wheel from 44 to 36 inches in front and 55 to 40 inches in the rear, did not increase the draft in as great a proportion as it increased the convenience of loading and unloading the ordinary farm freight. Diminishing the height of wheels below 30 inches front and 40 inches rear, increases the draft in greater proportion than is gained in convenience.

In regard to the relative length of the front and rear axles, it was observed that while increasing the length of the rear axle so that the front and rear wheels would not run in the same track did not increase the draft on good roads, that effect was produced on bad roads, sod, and cultivated ground. The inconvenience of the long rear axle, the necessity of using wider gates, and the necessity of employing greater care in driving them than when driving wagons with equal length axles, was held to count against that method of construction. Hence the conclusion that: "The best form of farm wagon is one with axles of equal length, broad tires and wheels 30 to 36 inches high in front and 40 to 44 inches behind.

"As an average of all the tests made on gravel roads," concludes the summary, "it is found that the high wheels draw 2.1 per cent. lighter than the medium ones, and 21.2 per cent. lighter than the low ones, the medium wheels draw 18.8 per cent. lighter than the low ones."

Taximeters on Horse-Drawn Cabs.

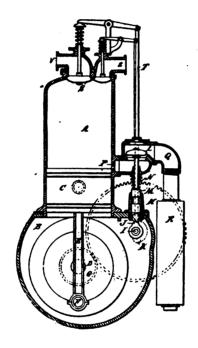
Hoping to regain at least a portion of the patronage which once was theirs, New York cabmen who are members of the cabdrivers' union, have installed taximeters on their horse drawn vehicles. Incidentally the traffic rates have been reduced so that passengers riding but half a mile will not be required to pay for a mile, as formerly was the rule. The half mile rate is 25 cents.

THE MOTOR WORLD

OLDS INVENTS SIX CYCLE MOTOR

Wall Port, Exhaust and Scavenging Valve Embodied in Patent—One Impulse Secured for Every Six Strokes.

Two-cycle and four-cycle motors abound, but the principle of the six-stroke cycle of operations is practically unknown, save in the laboratories of a few investigators who are working toward the improvement of the internal combustion motor. That any going or well known manufacturer was interested in the subject did not become generally known until last week, when there was is-



sued a patent covering the principle to "Ransom E. Olds and Horace T. Thomas, Lansing, Mich., assignors to Reo Motor Car Co., Lansing, Mich., a corporation of Michigan."

The principle involved is that of the ordinary four-cycle motor, supplemented by a scavenging cycle involving the introduction and expulsion of a charge of pure air at the end of every combustion stroke, for the purpose of freeing the cylinder of the products of combustion, and cooling it. As the scavenging operation requires two complete strokes, and the operation of the motor otherwise is practically the same as in the most common form of engine applied to automobile use, the complete cycle of operations requires an interval of five strokes between impulses, or six strokes to every impulse. It is from this sequence of operations that the name six-cycle is de-

The construction outlined in the patent specifications differs from that of the ordinary motor only in having a supplementary exhaust port at the side of the cylinder, opposite the end of piston travel, which is guarded by a mechanically operated valve,

opening outward, and in the use of a valve gear so timed, that the large valve in the cylinder head, which replaces the ordinary exhaust valve, shall be opened during the exhaust stroke, and held open for the two complete strokes following, so that the scavenging charge may be drawn in and expelled without interference due to compression or "wire-drawing." The claims allowed by the Patent Office embody practically these features, and no others are covered by them.

The accompanying illustration suffices to explain the arrangement. At the end of the working stroke, the piston, C. uncovers the exhaust port, P, in the cylinder wall, and at the same instant the valve, L. is opened mechanically, releasing the waste gases to the manifold and muffler, Q-F. On the return, or properly, the exhaust stroke, the cylinder contents, which are at practically atmospheric pressure, are evacuated through the valve, S, also mechanically operated. The next down and up strokes of the piston are devoted to the scavenging action, with which purpose, the valve, S, is held open, permitting air to be drawn in through the port, V, and subsequently expelled. The other organs are substantially regular in form.

Practical Text Book on Lubrication.

Various ingenious methods of instructing drivers in the art of properly caring for the machines under their control have been designed by enterprising sales managers, but perhaps none is equal in merit to that recently put into effect by a British manufacturer as covering the requirements of sane and successful lubrication. The operations incident to this have been divided into four groups, covering operations which should be performed daily, those which may be carried out at weekly intervals, those which are of semi-monthly frequency, and those which have to be gone through once or twice a year. A series of photographs have been prepared, illustrating graphically the operations in each of these groups, and the series is being embodied in a forthcoming issue of the usual instruction book. The brevity and force of instructions so propounded reflects great credit on its originator and is of particular interest locally because the maker in question has instituted a competition for chauffeurs driving his cars, in which the decision rests wholly with the persistance and success with which lubrication is carried out.

Wear in Joints Requires Attention.

Wear in the joints of propeller shafts should be looked after with scrupulous care. Replacements should be made wherever adjustment is impossible, and the working parts kept in as close working order as possible always. There is more action in these parts than generally is supposed, and the least amount of play produces a continual knocking which is very destructive in its tendencies.



TIRE INFLATION AND ITS EFFECTS

Relation of Pressure to Tractive Energy
Shown in Tests—Their Bearing on
the Heating of Tires.

Motorists in general have come to appreciate the importance of following the advice of the respective tire makers in the matter of inflation pressures, merely because it is understood that the tires wear longer under certain prescribed conditions than otherwise. That the tractive effort required to propel the vehicle, and so the speed which it develops under any gear, road surface or grade conditions may be affected by this same factor, however, is not generally appreciated. In fact the entire question of inflation pressures is none too well understood even by engineers, while the average user is quite in the dark as to the real influence which it may have both on the performance of the vehicle and on the life of the tire, except in the one important particular of ease of riding, on which observation alone suffices to inform him.

For this reason a series of tests covering this subject which have been made recently by Alex. Churchward, the well known electrical engineer, are of particular interest. These experiments which served to determine the relative amounts of energy consumed by the car under test with the tires inflated to different degrees of pressure, were carried out with an electric vehicle which was run upon a dynamometer so constructed that all four wheels were driven. The power delivered at the driving wheels was absorbed by a dynamo geared to the wheels of the dynamometer, and arrangements were made whereby observations might be made of the power consumed.

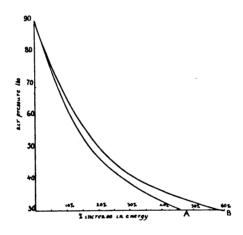
Accurate determinations were made as to the power losses in the vehicle motor and the transmission mechanism, so that the results here presented give the net variations in power due to the differences in tire pressure alone, and independent of all other considerations. The total weight of the machine under test was 2,100 pounds. The wheels were shod with 30 by 3½ inch tires, and the normal air pressure for the tires was 60 pounds. In carrying out the test the air pressure was varied from 30 to 90 pounds, the pressures being kept uniform on all four tires.

The results show a very marked increase in the tractive energy required to maintain any given speed, the minimum requirement being at 90 pounds pressure. With the energy required at 90 pounds as a basis, therefore, the accompanying curve was developed showing the relative increases of energy as the pressure was diminished. The curve, A, was determined on the basis of an average speed of 10 miles per hour, while the curve, B, was plotted from results of trials

which were made at 19 miles per hour, average speed.

From the curves, it will be seen that some 11 per cent. more energy was required to propel the vehicle at 10 miles an hour with the tires inflated to 60 pounds than when the pressure was raised to 90, while when the vehicle was being driven at 19 miles per hour, the increase amounted to a little over 13 per cent. Similarly, with 30 pounds tire pressure, the increases in energy consumed were, respectively, 47 and 60 per cent.

These results have an important bearing on a more or less heated controversy which has been aroused in England recently as a result of one of S. F. Edge's exploits when he drove a Napier car over a measured quarter mile on the Brooklands motordrome several times, with different tire pressures. His conclusion was that practically the same speed could be attained with the tires inflated to only 45 pounds as when they were



inflated to 100 pounds. Later he voiced the opinion that with the tires inflated to a high degree, the wheels were kept off the ground a considerable portion of the time, the rapid succession of sharp impacts resulting, causing bursts and rapid wear. With lower inflation pressures, he asserted that longer tire life was to be expected, provided only that the tire was so constructed that it could stand a relatively great amount of flexure without suffering from internal friction.

Following this pronouncement, a British tire concern has issued a new table of inflation pressures, advocating much lower degrees of inflation than had been their custom, while considerable discussion was aroused in defense of the time-honored theory that hard pumped tires must be "faster" than those subjected to lower degrees of inflation. It should be observed also that recent experiments made in England with a medium powered gasolene car in successive hill climbing trials under varied conditions of tire inflation have furnished an apparent confirmation of the Edge experiments, but under the modified conditions of the grade and a lower rate of speed.

Closely bearing on the subject of the energy requirement of the vehicle, is the question of heating of the tires. Of this, Mr.

Churchward states that he has found the heating to be influenced to a great extent by the chord of the tread, or the length of tread in contact with the ground.

"The longer the chord of tread with a given tire," he says, "the greater the amount of energy consumed—therefore, the hotter the tire will get. This is due to the greater flexing and kneading of the side walls and tread of the tire as it comes in contact with the ground."

With regard to the Brooklands demonstration that a large tire does not slow down a racing car, he says:

"I found from tests that it does not take more energy to drive a vehicle with a large tire and a lower air pressure, provided the chord of tread is approximately the same in both cars. Therefore it does not seem to me that the size of tire and air pressure in same would influence the speed much.

"As the percentage of energy consumed by the tires in a racing car is small compared with that due to windage, it is in the small powered car we find that the tires influence the speed and mileage. Also the type of tire used will have in many cases a direct influence, as at 15 to 20 miles per hour the wind resistance is small, but the tire loss great."

Neglect of the Fan Unwise.

Very many drivers seem to think that the fan on a water cooled car is of little importance. That this idea of the utility of the fan is generally held, is proven by the number of cars on which the fan is out of order. Usually its inactivity is due to a broken belt which, though but a few minutes would be required to make all necessary repairs, is allowed to remain broken until, for lack of something else to do. some one will make the simple repair. But the fan serves an important purpose, and should be kept in condition. Now that the hot weather is here, all devices which work to keep the cylinders cool should be required to do their full duty. If this fact is kept in mind the efficiency of the power plant will be increased.

Smoke Symptoms of Cylinder Lubrication.

Smoke as a test for thoroughness of cylinder lubrication is a popular, though by no means conclusive form of evidence on which many drivers are prone to rely. It should be borne in mind, however, that the mere fact that the exhaust is smoky does not indicate that the lubrication is complete, or rather excessive in all the cylinders. If the smoke issues from the discharge pipe of the muffler in a steady and practically continuous stream, this is the case. But if it comes in intermittent puffs, it may be taken as proof that only one compartment of the crank case is flooded, the other or others, being starved. Such a condition may indicate different rates of flow in the various feeds, or a total cessation in one or another. At all events it reveals a condition which will bear close scrutiny.



MAKING A "CONSISTENCY" RUN

Century a Day for a Century of Days the Schedule—Practical Demonstration of Motor Car Reliability.

A century a day for a century of days is the ambitious program now being carried out by a Premier car in an effort to demonstrate the ability of the modern motor car to perform a consistent day's work day after day continuously. The car was started on its 10,000 miles trip on Monday, 1st inst., at Indianapolis, when it was set in motion at the Soldier's monument by Chief of Police Metgzer. The first day's trip was east

Branch, has been practically idle with the exception of one or two automobile races that have been held upon it.

If the plans of the Elkwood Park Automobile Association, which was formed last week by several Long Branch cottagers, mature, the Elkwood Park track will be the scene of several race meets this summer, the first of which will occur on July 4th. Mayor Charles C. McFadden, of Long Branch, is president of the association; M. Robert Guggenheim is vice-president and William D. Anderson is treasurer. Thomas Francis Moore, the New York press agent, who has been jobless since the Briarcliff Trophy race, is to exploit the venture in the role of secretary. On the board of directors are Harry Payne Whitney, Fred



PREMIER CAR SCHEDULED TO RUN 10,000 MILES IN 100 DAYS

over the National road, where it met the Glidden Premier pathfinder, which was on its way back from laying out the route for the annual tour.

Since its initial trip the car has made its daily century in and around Indianapolis without mechanical mishaps and escaping even the puncture of a tire. On the 14th inst. its base of operations was transferred to Chicago, which city it reached at 2 p. m. on that day. Its odometer showed at that time a record of 1,519 miles. As at Indianapolis, a different route will be selected for each day's trip and a full complement of passengers will be carried. Buffalo, Philadelphia, Boston, New York and other cities will be included in the list of centers from which series of centuries will be run, and it is intended to make the test over every sort of American road. The century of centuries is scheduled to be completed on September 8th.

Automobile Track for Long Branch.

After a vacation of several years, Long Branch, N. J. is to spring into the limelight again as an automobile racing center. Since horse racing was abolished in New Jersey, the mile track at Elkwood Park, near Long Lewisohn, W. E. D. Stokes, P. J. Casey, Walter Lewisohn and Martin H. Vogel.

It is stated that the new association will repair the grandstand and that additional banking will be added to the track. It is the intention to hold race meets as often as possible and as long as the seashore resorters remain interested. The program for the first meet on July 4th includes a 100 miles endurance race, a 50 miles event for amateur drivers, 5 and 10 miles events for stock cars and time trials at one and two miles. Several fast cars already have been entered.

Running Apology for Raising Dust.

No small interest was aroused at a gymkhana contest in England recently by the appearance of one of the cars which bore upon the front of its dash board and running the full length, a sign bearing the inscription: "Sorry for the dust, which we raise but do not make." The upper half of the sign was hinged lengthwise and made to fold over the lower part ordinarily, but by a simple movement, the driver was able to raise it, displaying the apologetic legend to offended pedestrians and others to avert any possible misplacing of blame.

"AROUND THE WORLD" IN A DAY

Picturesque Automobile Fete Serves Benevolence in Montclair—Foreign Capitals

Amid New Jersey Hills.

Montclair's nurses' fund of the Society of New England Women, the gymnasium fund of the Pilgrim's Congregational Church and the Young Men's Christian Association were enriched jointly by more than \$2,000 realized at the "automobile trip around the world," held there on Saturday last, 13th inst. Although not new the unique idea met with popular favor with the New Jersey villagers. Nearly 150 cars were required in carrying the passengers from one city to another.

"Grand Central Station" was represented at the church, and when the first "train" pulled out nearly 1,000 people were in waiting. The committee ran the cars on short schedule, but even then they could not accommodate the crowds and a subway crush at Grand Central Station, New York City, on any afternoon at 5.10 was mild in comparison.

From "Grand Central Station" the passengers were conveyed to "Pekin," thus putting to shame all around the world records. From "Pekin" the route led to "Madrid." taking a jump back to "Yokohoma," then a side step to "Berlin" and finally to "Constantinople." The various residences which represented these cities were decorated characteristically, and provided with booths at which the passengers could purchase souvenirs brought direct from the foreign cities.

At "Yokohoma" the guest of honor was Kokokichi Midzuno, the Japanese Consul-General at New York, and his wife and two children in native costume. At "Pekin" there were a number of native Chinese, picturesquely attired, and at the other cities the scenes were effective by reason of the gay costumes and picturesque decorations. The proceeds go to the charities mentioned.

Brattleboro Club Elects Officers.

At its annual meeting held last week the Brattleboro (Vt.) Automobile Club elected the following officers: President, Charles T. Harris; vice-presidents; Charles W. Dunham and Ferris R. Vaughan; secretary-treasurer, Edwin B. Whitney; directors, William V. Vinton, John B. Manley and Charles A. Smith.

Nebraskans Organize Club at Lincoln.

The Lincoln Automobile Club has been organized in the Nebraskan city of that name with these officers: President, Dr. W. L. Dayton; first vice-president, Dr. W. Davis; second vice-president, Walton G. Roberts; secretary-treasurer, George Holmes; directors, Ernest Ames, F. C. Fiske, and Irving Chapin.



OHIO "AUTOMOBILE LAW" IN FORCE

Full Text of Its Provisions—Badges for Chauffeurs—The Two-Thirds of the Road Requirement.

Ohio's new law, designated by one of its provisions the "Automobile Law." went into effect on June 11th. In many respects it is identical with the New York law. It provides for registration in the office of the Secretary of State of all motor vehicles owned and operated in the State, except motorcycles, motor trucks or drays used exclusively for commercial purposes, road rollers, traction engines, fire engines, police patrol wagons and ambulances. It recognizes the term "chauffeur" which it defines as meaning any person operating a motor vehicle for hire or as the employe of an owner, and it requires the registration of such persons and the wearing of a badge showing the registration number. The registration fees are fixed at \$5 for gasolene vehicles, and \$3 for electrics. The chauffeur's license fee is \$2.

Speed is limited to 8 miles an hour in the business and closely built up sections of municipalities; 15 miles in other portions of such municipalities, and 20 miles elsewhere in the State. Local authorities are prohibited from making any speed regulations, but may define what are the business and closely built up portions of their respective municipalities.

The penalties provided for violation of provisions of the law consist almost wholly of fines, increased for second and subsequent offenses. The fines range from \$25 to \$300. Where the penalty of imprisonment is provided it is alternative with the fine, and in no case is an offender to suffer both forms of punishment, except for the display of a borrowed or fictitious number subsequent to a first conviction for such an offense. Suspension for a period of not less than one year nor more than two years is the extreme penalty provided for chaufeurs in case of a second or subsequent conviction.

In its other provisions the law is along the general lines of those enactments in other States, such as New York and Connecticut, which are regarded favorably by automobilists. The one extraordinary feature in it is that which requires that "all persons riding on horseback, or on a bicycle, tricycle, tandem bicycle, locomobile, automobile. or motor vehicle, shall, on meeting carriages or vehicles of any description, keep to the right so as to leave two-thirds of the road free." The full text of the law follows:

Section 1—That the term "motor vehicle" as used in this act, except where otherwise expressly provided, shall include all vehicles propelled by any power other than muscular power, except motor bicycles, motorcycles, motor trucks or drays used exclusively for

commercial purposes, road rollers, traction engines, fire engines. police patrol wagons, ambulances and such vehicles as run only upon rails or tracks.

Sec. 2—The term "local authorities" shall

Sec. 2—The term "local authorities" shall include all officers of counties, cities, villages or towns, as well as all boards, committees and other public officials of such counties, cities, villages or towns.

counties, cities, villages or towns.

Sec. 3—The term "chauffeur" shall mean any person operating a motor vehicle for hire, or as the employe of the owner there-

Sec. 4—The term "State" as used in this act, except where otherwise expressly provided, shall include the territories and the federal districts of the United States.

sec. 5—The term "owner of" or "person hereafter acquiring" shall include any person renting a motor vehicle or the exclusive use thereof, under a lease or otherwise, for a period greater than thirty days.

Sec. 6—Every owner of a motor vehicle or vehicles, which shall be operated or driven upon the public roads or highways of this State, shall annually for each motor vehicle owned or acquired, except as herein otherwise provided, cause to be filed by mail or otherwise, upon the payment of a registration fee of five dollars for such gasolene or steam motor vehicle, and a registration fee of three dollars for each electric motor vehicle, in the office of the Secretary of State, an application for registration, containing:

A brief description of the vehicle to be registered, including the name of the manufacturer, the manufacturer's number of the motor vehicle, if number there be, the character of the motor power, and the amount of such motor power stated in figures of horsepower.

The name and address of the owner of such motor vehicle, and the name of the county of the State in which he resides.

But any person to whom an annual 1908 license has been issued by any municipality of this State prior to the time when this act shall take effect, shall be exempt from the provisions of sections 6, 7, 8, 9, 10 and 11 of this act up to and until January 1, 1909

Sec. 7-Upon the filing in the office of the Secretary of State of an application as hereinbefore provided, the Secretary of State or his duly authorized agent shall assign to such motor vehicle as described in such application a distinctive number, and shall issue to the owner of such motor vehicle, as it is described in the application filed, a certificate of registration, which certificate shall be in the form of a card, which may be carried in the pocket and which certificate shall contain the distinctive number so assigned to such motor vehicle, the name and the address of the owner, a brief description of such motor vehicle, stating the name of the manufacturer, the manufacturer's number, if number there be, the character of the motor power, and the amount of such motor power stated in figures of horsepower.

Sec. 8—Upon the receipt of an application for registration of a motor vehicle as hereinbefore provided the Secretary of State shall thereupon file such application in his office and register such motor vehicle, with the name and address of the owner thereof, and the facts stated in the application, in a book or index to be kept for the purpose, under the distinctive number and identification mark assigned to such motor vehicle by the Secretary of State, and issue to the applicant a certificate as hereinbefore provided. The original book or index in which the motor vehicles are registered as hereinbefore provided shall be kept in the office of the Secretary of State, and shall be open to the inspection of any person during reason-

able business hours. An exact, full and accurate list of registered motor vehicles and their owners shall be furnished by the Secretary of State to the clerk of every county in the State, and such lists shall be kept as public records, in books to be furnished by the Secretary of State, in the office of such county clerk, and the Secretary of State shall further furnish to the county clerk of each county, once each month, copies of the additional applications for registration received, which shall be entered by the county clerk on the list kept by him as hereinbefore provided.

Sec. 9—That every motor vehicle, registered in accordance with the provisions of this act, shall have the distinctive number and registration mark assigned to it by the Secretary of State and furnished by the Secretary of State, in accordance with the provisions of section 10 hereof, as hereinbefore provided, displayed on the front and rear of such motor vehicle, as an identification mark, securely fastened, so as not to swing.

Sec. 10—That such distinctive number as an identification mark shall consist of a blue placard, as the background, upon the face of which shall appear the distinctive number assigned to such motor vehicle as hereinbefore provided, in white Arabic numerals, such numerals to be not less that four inches long, nor each stroke less that one-half inch in width, such number to be followed on the placard by the initial or abbreviation of the name of this State in white letters, each letter to be at least two inches in height, and each stroke to be at least one-half an inch in width.

Sec. 11—That in the case of a manufacturer or dealer in motor vehicles such manufacturer or dealer shall make applications for registration in the same manner as hereinbefore provided, of each gasolene, steam, electric or other make of motor vehicle manufactured or dealt in by such manufacturer or dealer, whereupon, upon the payment of a registration fee of ten dollars (\$10.00) there shall be assigned to such style or type of motor vehicle a distinctive number as an identification mark, which shall be carried and displayed by every motor vehicle of such style or type registered in the same manner as hereinbefore provided, while such vehicle is being operated on the public highway, and until such vehicle shall be sold or let for hire, and there shall be issued to such manufacturer or dealer a certificate of registration as hereinbefore provided for each gasolene, steam, electric or other make of motor vehicle, and as many certified copies thereof as may be desired. upon the payment of a fee of two dollars

(\$2.00) for each such copy.

Sec. 12—Every motor vehicle operated and driven upon the public roads or highways of this State shall be provided with adequate brakes sufficient to control the vehicle at all times and a suitable and adequate bell, horn or other device for signaling, and shall during the period from thirty minutes after sunset to thirty minutes before sunrise display three white lights, two on the front and one on the rear of each motor vehicle, the rays of which rear lamp shall shine upon and illuminate each and every part of the aforesaid distinctive number borne upon that part of the motor vehicle, the light of which front lamps shall be visible at least two hundred feet in the direction in which said motor vehicle is proceeding, and every motor vehicle shall also display, in addition to the foregoing, a red light on the rear thereof.

Sec. 13—The provisions of the foregoing sections shall not apply to motor vehicles owned by non-residents of this State, provided that the owners thereof shall have complied with the provisions of the law of

the State of their residence in regard to motor vehicles, and shall comply with such law while operating and driving a motor vehicle upon the public roads or highways of this State: Provided, however, that the foregoing sections of this act are substantially in force as law in the State of the residence of the owner of such motor vehicle, otherwise all provisions of this act shall

apply.
Sec. 14—No person shall operate a motor vehicle on the public roads or highways of this State at a rate of speed greater than is reasonable or proper, having regard to width, traffic and the use of the highway and the general and usual rules of the road or so as to endanger the property or life or limb of any person, or the safety of any

property. Sec. 15--In no event shall any automobile, motorcycle or other motor vehicle be operated at a greater rate of speed than 8 miles an hour in the business and closely built up portions of any municipality in this State, nor more than 15 miles an hour in the other portions of such municipalities, nor more than 20 miles an hour outside of such municipalities, which rates of speed shall not be diminished nor prohibited by any ordinance, rule or regulation of any municipality, board or other public authority, but municipalities may by ordinance define what are the business and closely built up portions of such municipalities.

Sec. 16—Any operator of a motor vehicle, upon meeting or overtaking a horse-drawn vehicle, or person on horseback, shall slow down and stop said motor vehicle when signaled so to do and shall remain in such condition until said horse-drawn vehicle or person on horseback shall have safely passed.

Provided, however, that such signal to stop shall be given in good faith and under the necessity of the circumstances, and only so often and for such length of time as shall be required to permit said vehicles to safely pass, whether approaching from the front or the rear. In case of accident to a person or property on the public highway, due to the operation thereon of a motor vehicle, the person operating such vehicle shall stop, and, upon request of a person injured, or any person present, give such person his name and address, and, if not the owner, the name and address of such owner.

Eec. 17—Every person hereafter desiring to operate a motor vehicle as a chauffeur shall file in the office of the Secretary of State, upon the payment of the registration fee of two dollars (\$2.00) an application for registration which shall state: The name and address of the applicant, and that he is competent to operate a motor vehicle; the trade name and the kind of motor power of the vehicles or vehicle he is competent to operate; and whether or not the applicant operate: and whether or not the applicant has ever been previously convicted of a violation of any of the provisions of this act, giving the date and place of such conviction, and the provisions of this act violated, if any.

Sec. 18—Upon receipt of such an application, the Secretary of State shall thereupon file the same in his office in a book or in

file the same in his office in a book or in-dex, which shall be kept in the same manner as the book or index for the registration of motor vehicles, as hereinbefore provided, and the Secretary of State shall forward a list of such registered chauffeurs, and such additions thereto, as shall be made from time to time, to the county clerk of every county in the State, in the same manner as hereinbefore provided in the case of registered motor vehicles, and such lists shall be kept as public records in the county clerk's office in every county in the State.

Sec. 19—The Secretary of State shall

forthwith upon the registration of such chauffeur, as hereinbefore provided, issue

to such chauffeur a badge of aluminum or other suitable metal which shall be oval in form and the greater diameter of which shall not be more than two inches; and such badge shall have stamped thereon the words, "Registered Chauffeur No. ...; State of Ohio,;" with the registration number inserted thereon, which badge shall thereafter be worn by such chauffeur, fastened upon his clothing in a conspicuous place at all times, while he is operating a motor vehicle upon the public roads or highways of this State. Sec. 20—No chauffeur having registered

as hereinbefore provided shall voluntarily permit any other person to wear his badge, nor shall any person while operating a motor vehicle upon the public roads or highways of this State wear any chauffeur's badge, belonging to another person, ficti-tiously representing himself to be a regis-

tered chauffeur.

Sec. 21-No person shall operate a motor vehicle as a chauffeur on the public roads or highways of this State, subsequently to thirty days after this act takes effect, unless such person shall have complied in all respects with the requirements of this section; provided, however, that a mon-resident chauffeur, who has registered under the provisions of the law of the State of his residence, which are substantially similar to the provisions of this section, shall be ex-empt from registration under this section; provided, however, that he wear a badge assigned to him in the State of his residence in the same manner as hereinbefore pro-

vided, and comply with all the other provisions of this section.

Sec. 22—No chauffeur or other person shall drive or operate or cause to be driven or operated, any motor vehicle upon any public road or highway of this State in the absence of the owner or such motor vehicle,

without such owner's consent.

Sec. 23—No local authority shall have any power to make any ordinance. by-law or resolution regulating the speed of motor, provided, however, that local authorities may set aside for a given time a specified public highway for speed tests or speed.

may set aside for a given time a specified public highway for speed tests or races. Sec. 24—The violations of sections 6, 9, 11 and 12 of this act shall be punishable by a fine not exceeding twenty-five dollars (\$25) for a first offense, by a fine not less than twenty-five dollars (\$25) and not exceeding fifty dollars (\$50) for a second offense, and by a fine not less than fifty dollars (\$50), and not more than one hundred dollars not more than one hundred dollars (\$100) or imprisonment for not more than thirty days for a third and subsequent offense.

Sec. 25—Any violation of section 14, 15 and 16 of this act shall be deemed prima facie evidence of a misdemeanor punishable by a fine not exceeding twenty-five dollars (\$25) for a first offense, and by a fine not less than twenty-five dollars (\$25) and not exceeding fifty dollars (\$50) for a offense, and by a fine not less than fifty dollars (\$50) and not more than one hundred dollars (\$100) or imprisonment for not more than thirty days for a third offense, and for any subsequent offense, within one year, imprisonment for not less than ten days, nor more than thirty days.

Sec. 26—Any person operating or driving a motor vehicle on the highways of this State, which shall display thereon a distinctive number or identification mark belonging to any other motor vehicle or one which is fictitious, shall be deemed guilty of a mis-demeanor, which shall be punishable by a fine of twenty-five dollars (\$25) for a first offense and for any subsequent offense by a fine not less than fifty dollars (\$50) or more than three hundred dollars (\$300) or imprisonment for sixty days or both.

Sec. 27—Any violation of section 17, of

this act, by a person not registered as a chauffeur, as hereinbefore provided, shall be punishable by a fine of not more than firty dollars (\$50) or the suspension of the right to apply for registration as a chauffeur, un-der this act, for one year or both, and for a subsequent or second offense by a fine of not more than one hundred dollars (\$100) and in addition the suspension of the right to apply for registration as a chauffeur for a time not less than one year or more than two years.

Sec. 28--Any violation of sections 19, 20 or 21 of this act, by a chauffeur, registered as hereinbefore provided, shall be punishable by a fine not exceeding fifty dollars (\$50), or by the suspension of the right to operate a motor vehicle as a chauffeur under the provisions of this act for a period of six months or both, and for a second or subsequent offense by a fine of not less than fifty dollars (\$50) and not exceeding one hundred dollars (\$100) and in addition the suspension of the right to operate a motor vehicle as a registered chauffeur un-der the provisions of this act for one year, and for such further time as shall be fixed

by the trial court.

Sec. 29—Any violation of section 14. 15 and 16 of this act by a registered chauffeur shall be a misdemeanor and punishable as provided in section 25 and in addition thereto a suspension of the right to operate a motor vehicle as a registered chauffeur as hereinbefore provided for thirty days for a second offense and for a period of not less than one year for a third offense, in which case the registration of such chauffeurs shall

become null and void.

Sec. 30—Any person violating any of the provisions of section 22 of this act shall be deemed guilty of a misdemeanor, and upon conviction shall be fined a sum not exceeding two hundred dollars (\$200) or imprisonment for a period not exceeding six (6) months or both in the discretion of the

Sec. 31—Upon the conviction of any person for a violation of any of the provisions of this act, the magistrate or other judicial officer, before whom the proceedings are held shall immediately certify the facts of the case and the character of the punish-ment to the Secretary of State, who shall enter the same, in the case of an owner or chauffeur, either in the indices of registered motor vehicles or registered chauffeurs, as the case may be, opposite the name of the person convicted, as in the case of any other person, in an index of offenders to be kept for such purpose, in alphabetical order. The Secretary of State shall then send notice of the conviction and the punishment of all such persons, whether owners, chauffeurs, or other persons to the county clerk of every county in the State, who shall enter the same upon the lists of registered mo-tor vehicles or registered chauffeurs, as the case may be, which are kept by him as hereinbefore provided, or upon a list of other offenders which he shall maintain in his office as a public record in the same manner as the registered lists of motor vehicles or chauffeurs as hereinbefore provided for. and shall furnish copies of such lists to the magistrates or other judicial officers of his county by whom the offenses against the

provisions of this act are punishable.

Sec. 32—In case any person shall be taken into custody because of any violation of any of the provisions of this act, he shall forthwith be taken before any magistrate or juswith be taken before any magistrate or justice of the peace in any city or village or county, and be entitled to an immediate hearing: and if such hearing cannot be held shall be released from custody on giving his personal undertaking to appear in answer for such violation at such time or place as shall then

SECURING RESPECT FOR THE LAW

Efficacy of Mild Measures for Enforcement
Practically Exemplified — Motorists
Heed Timely Suggestions.

Two examples of what may be effected in securing observation of the law by motorists through appealing to their sense of right are afforded by the town of Middleboro and the city of Newton, both in Massachusetts. The town authorities of Middleboro and the local automobile club co-operated in a plan for placing along the roads through the town banners offering fair play to the passing automobilists and asking rair play in return. The basis of this reciprocity is a speed limit of 12 miles an hour through the town, and the plan has been found to work well.

Placing the responsibility of reasonable driving upon the automobilists themselves is a plan which has been followed in many instances with gratifying success by Chief of Police Mitchell of Newton. Letters to individual, and perhaps unintentional orfenders, and numerous signs setting forth the speed regulations and location of dangerous corners, have been used with excellent results by the police of that city.

"A large majority of automobilists who drive over the streets throughout Newton are careful drivers," Chief Mitchell says. "It is but a small number who flagrantly disregard the written and unwritten laws of the road and cause trouble. Frequently reports are made by patrolmen and civilians that machines are run at excessive speed through different streets, around dangerous corners or on the boulevard roadway reserved for horse-drawn vehicles.

"We make it a point to secure the numbers of such machines. We then write a brief letter to the owners, setting forth the day, time and place that their machines were run in alleged violation of the law, and notifying them that they must exercise care in driving within the limits of this city.

"This plan was adopted three years ago. Some weeks but a few letters will be sent out, while in other weeks a dozen or more are mailed. The plan has been very successful in stopping individual alleged offenders. It will be followed during the present season," said Chief Mitchell. In addition to the signs along various frequented thoroughfares setting forth the speed regulations, there have been erected signs warning automobilists to slow down to low speed."

Toll Roads Must be Open to Automobiles.

Pennsylvania automobilists won a big victory at Wilkes-Barre on Monday last, 15th inst, when Judge Halsey in a lengthy opinion declared that no toll road company has a right to keep automobiles off its

road. The toll roads around Wilkes-Barre have been a bone of contention between automobilists and the companies operating them for several years and the case which brought the opinion was watched with more than ordinary interest.

The case in point was that of W. W. Scranton, of Scranton, against the Laurel Run Turnpike Co., which owns the beautiful boulevard driveway over the mountains from Wilkes-Barre to Bear Creek, and which, ever since the road was opened, has been closed to automobiles. Scranton decided to make a test case and be brought suit after being refused admittance.

Judge Halsey decides that under the act of 1874 an automobile must be included in the general designation as a carriage of pleasure, under whatever name it may go, and as such is to be admitted on all public highways, a point which automobilists have been endeavoring to make many judges see for several years.

Judge Halsey refuses to concur with the allegation of the company that the law fixes no lawful and reasonable toll for automobilles and orders that the road shall be opened to them at once. If all the toll companies in Pennsylvania respect the ruling of Judge Halsey, motoring in the hilly section, in which these toll roads abound, will become a pleasure instead of a hardship and distances between points of interest will be ntaterially shortened.

New Massachusetts Court for Motorists.

Among the latest acts of the Massachusetts legislature, now adjourned, was the passage on the 10th inst. of the automobile bill which originated with the Safe Roads Association of that State. Under the new law the State highway commission becomes both an executive and a judicial body, for it not only is obliged to execute the laws, but it may go ahead and investigate cases and summon witnesses the same as any court. There is also provided in the new bill a section for the employment of investigators to delve into accident cases in the same way the Safe Roads Association does. There is a provision that requires the commission to revoke the license of an operator of a car who figures in serious accident, and who upon conviction, appeals, Unless the person is acquitted in the upper court, or the commission on investigating the facts finds there are mitigating circumstances, no new license shall be issued for at least 60 days after conviction, and the commission has the power to withhold it even then.

Lost License Pads May be Replaced.

Under a ruling made last week by J. B. R. Smith, Commissioner of Motor Vehicles for New Jersey, a motorist may obtain duplicate official license pads for his machine in case the originals are lost, by making affidavit to that effect. The price will be 75 cents for a single pad, or \$1.50 for a set of two.

be indicated, secured by a deposit of a sum equal to the maximum fine for the offense with which he is charged, or in lieu thereof, in case the person taken into custody is the owner, by leaving the motor vehicle, and in case the person taken into custody is not the owner by leaving the motor vehicle with a written consent given at the time by the owner, who must be present, with such judicial officer; or in any case, if such judicial officer is not accessible, shall be forthwith released from custody by giving his name and address to the person making the arrest and depositing with such arresting officer a sum equal to the maximum fine for the offense for which such arrest is made, or in lieu thereof, in case the person arrested is the owner by leaving the motor vehicle, and in case the person is not the owner, by leaving the motor vehicle with a written consent given at the time by the owner, who must be present; provided, that in such case the officer making the arrest shall give a receipt in writing for such sum or vehicle deposited and notify such persons to appear before the most accessible magistrate naming him, specifying the date, place and the hour.

In case such undertaking with security or deposit shall not be made by an owner or other person taken into custody, the provisions of law in reference to bail in cases of misdemeanors shall apply.

Sec. 33—The revenues derived from the registration fees provided for herein shall be applied by the Secretary of State toward defraying the expenses incident to the carrying out and enforcement of the provisions of this act, and any surplus thereof shall be paid by the Secretary of State into the treasury, monthly. All actions for injury to the person or property caused by the negligence of the owner of any automobile included within the provisions of this act, may be brought by the party injured against the owner of such automobile in the county wherein such injured party resides. In case such action is begun, a summons against any defendant or defendants shall be issued to the sheriff of any county within the State of Ohio, wherein such defendant or defendants, as in other civil actions, any law to the contrary providing for the service of summons in civil actions notwithstanding.

Sec. 34—All moneys coming into the treasury, pursuant to this section, shall be there maintained as a separate fund for the improvement, maintenance and repair of the public roads and highways of this State, and shall be apportioned as the State highway fund is apportioned by law.

Sec. 35—This act shall be known as the "Automobile Law," and shall take effect and be in force from and after thirty days after its approval by the Governor.

after its approval by the Governor.
Sec. 36—That section 3490 of the Revised Statutes be amended so as to read as fol-

Sec. 3490—All persons driving carriages or vehicles of any description on any public turnpike, road or highway of this State. shall, on meeting carriages or vehicles of any description keep to the right so as to leave half of the road free, and all persons riding on horseback, or on bicycle, tricycle, tandem bicycle, locomobile, automobile, or motor vehicle, shall, on meeting carriages or vehicles of any description, keep to the right so as to leave two-thirds of the road free

Sec. 37—That section 3490 approved April 23, 1904, and an act entitled, "An act to compel owners and operators of motor vehicles to register with the Secretary of State," passed April 2, 1906, be and the same are hereby repealed.

To Sum Up-

Solar Motor Lamps are superior to those of other manufacture for the following reasons:



(1) The internal method of screw assembling insures a perfectly smooth exterior. (2) All parts are interchangeable. (3) They have fewer parts. (4) Are more simple in construction. (5) Less solder is used. (6) The brass has more "body"—they are heavier and more durable. (7) They are better in design. (8) Special B & L Solar short focus Mangin Mirrors are used and each lamp is tested for accuracy of focus. The highest efficiency as regards lighting is assured.

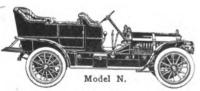
No detail is overlooked in the construction of Solar Lamps. The Solar Nameplate is a positive guarantee to the user that he has the best in lighting equipment.

Write for a copy of our 1908 catalog.



Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.

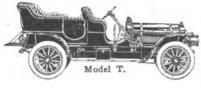


Model K-4 cyl., 4% x 5 \$3,500

Model N — 4 eyl., 5 x 5 \$3,700

All Nationals have two complete systems of ignition.

Medel R - 6 cyl., 4½ x4¾ \$4,200



Model T — 6 cyl., 5 x 5 \$5.000

Write for particulars and our Booklet "What Owners Say
About Their Nationals."

National Motor Vehicle Co.

1007 E. 22d Street INDIANAPOLIS, IND.

GABRIEL Motorcycle Horn



The new Gabriel Horn for Motorcycles, just out, produces a two-note musical tone that can be heard half a mile away.

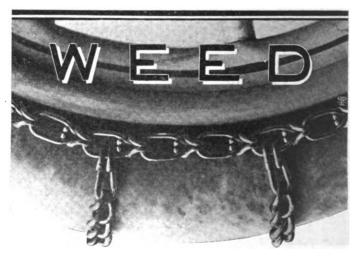
Attached to exhaust pipe and operated by spring lever attached to small butterfly cutout valve.

The Gabriel Horn Outfit includes horn of highly polished brass tubing 1½ by 11 inches, butterfly cut-out valve, spring, cable and clamp for attaching to frame.

Price of Horn, only . . . \$5.0 Price of Outfit, complete . . 8.0

GABRIEL HORN MFG. CO.

1417 E. 40th Street, CLEVELAND, OHIO



Weed Chains Will Answer the "Skid" Question to Your Entire Satisfaction

They positively do not injure the roads. The pressure upon the tire forces the chain into the rubber, not into the road. The "creeping" of the chain prevents injury to the tires. From the lightest runabout to the heaviest limousine WEED CHAINS are necessary equipment. Skidding is dangerous, both to car and occupants. It is impossible to skid with WEED CHAINS. Write for Bulletin.

WEED CHAIN TIRE GRIP COMPANY
35 Moore Street, New York

The Week's Patents.

884,562. Tire Construction. Frederick A. Bragg, Springfield, Mass., assignor, by direct and mesne asignments, of one half to Daniel J. Brown, Springfield, Mass. Filed Sept. 10, 1906. Serial No. 333,975.

1. In a tire construction, a series of layers composing the tread portion, said layers including a rubber core and quilted by threads saturated with a rubber solution.

884,731. Electric Igniting Device. Roy E. Hardy, New York, N. Y. Filed Dec. 18, 1905. Serial No. 292,178.

1. In an electric igniting device the combination of an induction coil, a casing of non-conducting material inclosing said coil and projecting at one end beyond the same, exterior binding screws carried by the casing in electrical connection with the terminals of the primary of the coil, a sparking plug having an exterior metallic shell forming one electrode, a second electrode insulated therein, a flanged head integral with the shell detachably engaging and closing the projecting end of the casing and forming an air space between it and the induction coil, and electrical connections connecting the exterior shell and the insulated electrode with the terminals of the secondary within the air space in the casing.

884,752. Center Drive Axle and Wheel. John McGeorge and Harold McGeorge, Cleveland, Ohio. Filed March 5, 1907. Serial No. 360,703.

1. In a driving mechanism for vehicles, the combination of a pair of wheels, a driving shaft, and clutch mechanism interposed between the driving shaft and each wheel shaft, substantially as specified.

884,794. Protecting Casing for Tires. Lorwin N. Cates, St. Louis, Mo. Filed June 15, 1907. Serial No. 379,188.

A tire casing composed of series of pairs of sections hinged together along the outer edge or tread of the wheel, tongues projecting from the sections on opposite sides of the hinge-line, and sockets formed in the contiguous sections for receiving said tongues and thus interlocking with the sections carrying said tongues, substantially as set forth.

884,846. Gasolene Turbine Motor. James F. Orebaugh and Charles W. Connett, Madison, Ind.; said Connett assignor to said Orebaugh. Filed May 25, 1907. Serial No. 375.675.

1. In a motor, the combination of a casing, a partition secured to said casing, a series of explosion chambers fixed to said casing, compressing plungers mounted to reciprocate in the explosion chambers, a spring seated piston head mounted in the explosion chambers, means for moving the plungers inward to compress the charge, a shaft mounted in the casing, and a series of bucketed rotors keyed to the shaft.

884,853. Internal Combustion Engine. Carlton R. Radcliff, New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J., a Corporation of South Dakota. Filed July 26, 1906. Serial No. 327,808.

1. In an internal combustion engine, the combination with a plurality of cylinders, of a gas receiving and compressing space in each cylinder and having an inlet and a port near the lower end thereof to allow exhaust of the products of combustion in case of back fire. a combustion chamber in each cylinder and having an exhaust, and a com-

municating passage between the gas receiving space of one cylinder and the combustion chamber of another cylinder.

884,882. Overland Steam Coach. Robert L. Woods, Nashville, Tenn., assignor of one-third to Solomon P. Harris, Nashville, Tenn. Filed March 1, 1906. Serial No. 303,712. Renewed Feb. 13, 1908. Serial No. 415,764.

1. The combination with a vehicle body, of the front and rear trucks, a plurality of sets of wheels pivotally mounted for rotation on the forward truck, and means connecting said wheels whereby the movement of one set of wheels will effect the movement of the other.

884,929. Radiator or Cooler for Motor Road Vehicles. Friedrich J. D. Hullinghorst, London, England. Filed June 24, 1907. Serial No. 380,579.

1. In radiators or coolers, for motor road vehicles having an air propelling fan said radiator being provided with an axis and a main annular chamber, in combination with means providing additional small and large annular chambers concentric with the axis of said fan, and disposed at the back and front of the radiators, with a sechambers, and connected at their outer ends with said large chambers, partitions dividing said large chambers into two compartments and communicating pipes or passages from the said main annular chamber, so that the water to be cooled is caused to flow from the upper compartments of said larger concentric chambers through the upper half of the series of radial tubes to the inner annular chambers, and thence through the lower half of the series of radial tubes into the lower compartments from which it flows into the base of the radiator and circulates about the main annular chamber, as set forth,

884,967. Shock Absorber for Vehicles. William C. Williamson, New York, N. Y. Filed May 10, 1907. Serial No. 372,890.

1. In a shock absorber, in combination, a case, a spring barrel, a spring plate, the edges whereof are supported in said case, and a member held against the body of said plate and transmitting the pressure thereof to said barrel.

885,014. Front Driven Motor Vehicle. Arthur W. Brightmore, Burford, Egham, England. Filed Sept. 27, 1906. Serial No. 336,458.

1. In a motor propelled vehicle of the type referred to, a segmental race and rack on the vehicle under frame, a slider engaging said race and pivoted on the fore-carriage at the "neutral" position, a pinion meshing with the rack and fixed on a spindle carried by the slider, a second spindle connected to the former by a universal joint, a worm wheel on the second spindle, a worm meshing therewith and means for driving the same, substantially as hereinbefore set forth.

885,059. Indicator for Tanks. Julius B. Laursen, Sorkness, N. D. Filed April 11, 1907. Serial No. 367,539.

1. In a device of the class described, a dial receiving member having a central bore terminating at one end in a recess, a rod having threaded extremities rotatably mounted in the bore, a pointer engaging one of the threaded ends of the rod and adapted to rotate in the recess of the member, a float, means co-operative with the latter and the opposite end of the rod to ac-

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order. In capitals, 25 cents per line.

FOR SALE—Pierce Great Arrow 1908
Light Six. Absolutely new, run less
than 300 miles. Cost \$5,750. Color, Brewster green, light green stripe. Owner cannot afford to keep car and will sell it at a
sacrifice. Address HENRY WILLIS, Box
704, Rochester, N. Y.

T IRE FLUID PROFITS—I will sell you a formula that I have successfully used for 10 years that will enable you to make money on filling tires. HY. AYLING, Jr., 310 N. West St., Syracuse, N. Y.

FOR SALE—Reasonable, all or part patent No. 882,998, six wheel logging automobile, for loading and transporting saw logs. N. F. COFFEY, Black Rock, Ark.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save vou on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

"REMY MAGNETO"

Means absolute reliability of the ignition system.

Investigate for your 1908 car.

REMY ELECTRIC CO., Anderson, Ind.

STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Workmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model \$40. American \$25. Guaranteed Absolutely for Five Years. STEWART & CLARK MFG. CO., 509 Diversey Boulevard, Chicago, U. S. A.

McCORD LUBRICATORS — RADIATORS "Marks of a Good Motor Car"

McKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY

NEW YORK—Hudson Terminal, 50 Church Street. Old Colony Building, CHICAGO.



tuate the same to move the pointer, a crystal mounted on said member above the recess therein, a detachable cap for securing the crystal in position on the member, and a removable stopper carried by the cap.

885,111. Steering Wheel Pivot and Pivot Bearing for Automobiles. Josef Vollmer, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 20, 1906. Serial No. 322,592

The combination with a steering wheel pivot, of an axle fork having an upper bearing for the pivot, a removable lower bearing therefor which is divided to permit the removal of the pivot, and means for ad-justing one of said bearings to secure a uniform distribution of the weight upon the bearings.

885.121. Puncture Telltale. Charles A. Winter, New York, N. Y. Filed Aug. 14, 1906. Serial No. 330,592.

1. In a puncture telltale, the combination of a pneumatic wheel tire, an electric circuit closing device comprising a contact carried by the wheel, a part connected with said contact and engaged by the tire, a con-tact mounted on a part stationary with ref-erence to the wheel in the path of the wheelcarried contact, the tire when inflated acting on the part engaged thereby to keep the wheel-carried contact from touching the stationary contact, and means that moves the wheel-carried contact to cause its engagement with the stationary contact when the tire is deflated.

885,181. Automobile Buffer. James H. Sager, Rochester, N. Y. Filed Feb. 21, 1908. Serial No. 417,190.

In an automobile buffer, a horizontal buffer rod, lever means attached to said rod and pivoted to the frame of the automobile and pivoted to the frame of the automobile on an axis in a substantially vertical plane and projecting at an angle to said plane from the pivotal axis to the attachment thereof to said rod, a spring put under stress by movement of the lever around its pivot, and a spring support attached to said automobile and in convenient proximity to said lever.

885,249. Steering Gear for Automobiles. John C. Higdon, St. Louis, Mo. Filed Dec. 4, 1906. Serial No. 346,331.

1. A steering gear for motor vehicles, the front axles of which swivel horizontally, comprising a steering post, arranged for operation in the body of the vehicle, a pinion fixed on the lower end of the steering post, a chain engaging the teeth of the pinion, connections between the ends of the chain and the outer portions of the swiveled axles, and a chain retainer fixed to the vehicle frame and adapted to hold said chain on said pinion.

THE MOTOR WORLD

885,336. Tire Cushion for Vehicles. William E. Garvey, Cleveland, Ohio. Filed June 4, 1907. Serial No. 377,136

1. A vehicle tire consisting of a rubber casing, a core of rope, and a winding there-on of a strand of yarn fitting and filling the rubber casing and forming a cushioning support therefor upon the rope core.

885,493. Horn. Howard W. Lester, Hartford, Conn., assignor to The Post & Lester Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 5, 1907. Serial No. 400,752.

A horn consisting of a tapered convolute body with the smaller end of the body at the periphery and the larger end of the body at the center, said larger end having an ovoid perforated head in the plane of the coils, substantially as specified.

885,505. Driving Gear for Automobiles. Henry G. McComb, Detroit, Mich. Filed Jan. 2, 1907. Serial No. 350,441.

1. In combination a power shaft, a plurality of gear wheels fixed thereto, a counter shaft, complementary gear wheels carried thereby and adapted to be thrown into and out of operative connection with said first mentioned gear wheels, a plurality of driving wheel mechanisms, each deriving their power therefrom independently of the other, and a second counter shaft axially in line with the power shaft and adapted to be thrown into clutching engagement there-with to receive from it the power ordinarily transmitted to the first named counter shaft, substantially as described.

885,647. Pneumatic Vehicle Tire. Mary B. Priest, Milwaukee, Wis., assignor to The Priest Tire Company, a Corporation of Wisconsin. Filed May 20, 1907. Serial No. 374,567.

In a pneumatic vehicle tire comprising a one piece tubular casing, having flexible side walls, a flattened split base, and an outer flat tread extension; the combination of a metallic band fitted to the flat tread extension, a pliable annular shoe fitted over the band, metallic clamping rings fitted to the sides of the shoe and said flat tread ex-tension, and securing bolts connecting the

Unfailing Reliability and Efficiency are what have made

SPLITDORF IGNITION the most widely used of any ignition system.

C. F. SPLITDORF Walton Ave. New York

New and Absolutely Fireproof. HOTEL TULLER Adams Ave. & Park St. DETROIT, MICH.



AUTOMOBILE HEADQUARTERS

In center of Theatre, Shopping and Business dictrict. Club Breakfast, 40c. up. A la Carte Cafe, Grill Rooms. Every room with bath. Rates \$1.50 per

L. W. TULLER, Prop.

M. A. SHAW, Mgr.



SUPERIOR Etched Name Plates

We are prepared to furnish you any kind We shall be pleased to or style as above. furnish quotations.

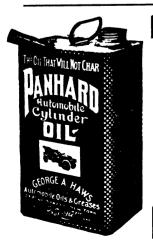
CHANDLER CO., Springfield, Mass.

You can run your motor at SLOWFR SPEED on the magneto with an

SEMANN than with any other

MACNETO

LAVALETTE & CO., 112 West 42nd Street, New York



PANHARD

"The Oil in the Checkerboard Can"

A trial will convince you that it is the best. Don't take our word for it alone. Made in four grades. Write for our booklet.

George A. Haws 81 PINE STREET NEW YORK

IF YOU ARE INTERESTED IN MOTORCYCLES The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

Specimen Copies



EMPIRE AUTOMOBILE TIRE COMPANY,

TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Portland, Ore.; Fobes Auto Supply Co., Seattle, Wash.; Waite Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.



Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



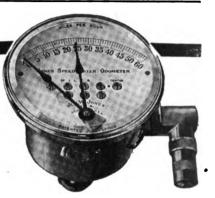
DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

A Speed Indicator that is sold on its merits only



JONES SPEEDOMETER

THIRTY day free trials—written guarantees, etc., are inducements—premiums—used to foster the sale of inferior products. The "Jones" requires no inducements—no premiums—no offers. It is sold on its reputation, on its merits only. Eight years of constant accuracy, eight years of unequalled performance, eight years of unfailing reliability, are the qualities, are the facts, are the results, that sell the Standard Speed Indicator of the World.

JONES SPEEDOMETER, and Broadway New York

1841 Euclid Ave.

DETROIT 247 Jefferson Ave.

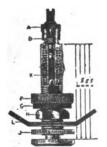
BOSTON 109 Massachusetts Ave.

259 N. Broad St.

CHICAGO 1421 Michigan Ave.

ESTABLISHED 1844

SCHRADER UNIVERSAL VALVE Trade Mark Registered April 30, 1895



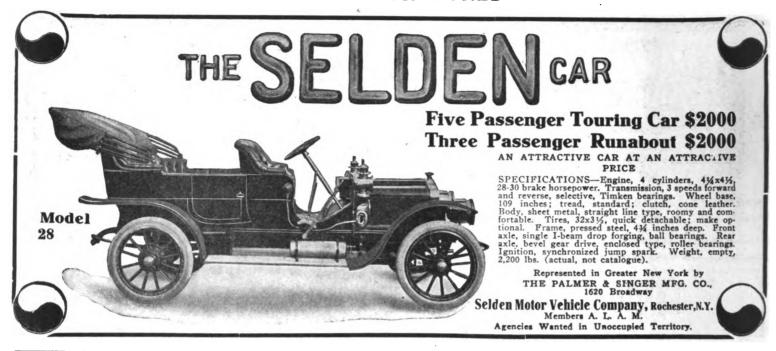
SIMPLE AND ABSOLUTELY AIR TIGHT

¶ Schrader Motor Tire Valves, as shown in cut, are the regular equipment for G & J Motor Tires, Hartford Dunlop Detachable Tires, Fisk Detachable Motor Tires, and New Goodyear Detachable Motor Tires.

Our No. 777 Motor Tire Valve is the standard for 2½ inch and 3 inch Tires and our No. 725 Motor Tire Valve is the standard for tires larger than 3 inches.

Supplied to the Trade by All Tira Manufacturera

Manufactured by A. SCHRADER'S SON., Inc., 28-30-32 Roso St., New York



THERMOID Brake Lining

POSITIVELY WILL NOT BURN-GRIPS INSTANTLY-LASTS INDEFINITELY

Write for Particulars

TRENTON RUBBER MFG. CO.,

2900 State Street, TRENTON, N. J.



AVOID ACCIDENTS

by using the

Wridgway No Glare Shade

which adds to the efficiency of the lamps, and keeps glare from blinding other users of the highways. Can be fitted to any existing lamp.

Peerless Motor Car Co, w. 41st Street. New York



THE WICO INSPECTION LAMP

is invaluable. It furnishes a brilliant, six-candle incandescent light, that makes it possible to locate trouble with the engine, or replace a tire without the aid of flickering matches that are worse than useless.

The lamp has machine-made wire guards and is connected by 10 feet of silk cord, with special wire terminals and wide openings to the battery terminals. Cannot chafe or short-circuit.

Neatly packed in compact box ready for instant use. Write for particulars.

Wico Spark Plugs, Wico Ignition Wire, Wico Charging Device, Witherbee Batteries, Volta Magneto.

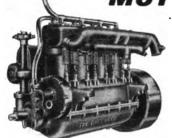
WITHERBEE IGNITER CO.

Makers of the Famous Witherbee Battery 1876 Broadway, New York

CHICAGO DETROIT BUFFALO 1429 Michigan Ave. 200 Jefferson Ave. 720 Main St. Baltimore Office—510 Continental Building. Geo. P. Moore Co., Pacific Coast Distributors, San Francisco-Los Augeles.



MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909

4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

For Automobile Bodies, Dashes, Guards, Bonnets, Battery Boxes. Drip Pans. Mufflers. Etc.

TRONG-DURABLE CALELESS—RUSTLESS MOOTH-PAINT ADHERES FIRMLY

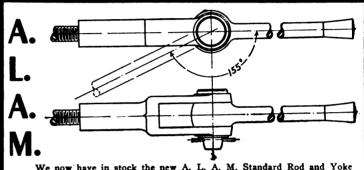
A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO

RAJAH" SPARK PLUGS

ICNITION ABSOLUTELY SURE

RAJAH AUTO SUPPLY COMPANY

140 WASHINGTON STREET, NEW YORK, U. S. A.



We now have in stock the new A. L. A. M. Standard Rod and Yoke Ends, both the adjustable and plain patterns, either blanks or milled. Send for new circular with full particulars.

THE BILLINGS & SPENCER CO., Hartford, Conn.



<u> Supplementary Spiral Springs</u>

Provide SPRING INSURANCE and SPRING COMFORT.

Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the "wise ones."

Let us send you our interesting booklet, and ask your dealer about them.

SUPPLEMENTARY SPIRAL SPRING CO.

4555 Delmar Avenue, St. Louis, Mo.

New York Branch—Removed to Motor Mart Building (Larger Quarters)

ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.



"Nothing Finer the World Over."

Hotel Pontchartrain

Cadillac Sq., Cor Woodward Ave. DETROIT, MICH.

Absolutely Fireproof.

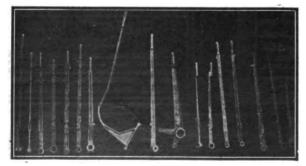
Combines more up-to-date features than any other hotel in the country. Appeals particularly to tourists and travelers.

Conducted on European Plan. Unsurpassed Cuisine—Excellent Service.

RATES: \$2 Per Day and Upwards. PONTCHARTRAIN HOTEL, CO., Props.

GEORGE H. WOOLEY. W. J. CHITTENDEN, JR.,

PARSONS' MANGANESE BRONZE LEVER CASTINGS



WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, Philadelphia, Penna.

Packard Enameled IGNITION CABLE

Is Always of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF. Samples and Prices on Request.

THE PACKARD ELECTRIC CO., - Warren, Ohio

This is the

PULLMAN



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.



1908 Model D. 50 H. P.
Ne. / factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COM ANY,
Broadway, cor. 56th St., New York.

Exclusive LUGAN

2-Single shifting lever gives three speeds forward and one reverse.

For other features write for catalog to THE LOGAN CONSTRUCTION COMPANY, Chilicothe, O.

Show

a Mitchell. Phone "that" to any Mitchell Agent and he'll take you out if you're interested in the best value for money outlay you ever saw in the automobile line. Mitchell cars sell themselves. Prove it. Ask for catalog 18.

MITCHELL MOTOR CAR CO., RACINE, WIS.

"AURORA" THE

Runabout \$775—20 H. P. Commercial Wagon \$1000-20 H. P.

Live proposition to agents.

AURORA MOTOR WORKS,

Aurora, Ill.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep-No Hill Too Steep."

2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,000.

JACKSON AUTOMOBILE CO., Jackson, Mich.



"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade two and four cylinder motors, 10 to 45 horsepower. They are equipped with self-contained oiling system and ready for attaching magnet o. Highes to grade workmanship, efficient, durable and simple. Also clutches and trans-Send for catalogue.

CONTINENTAL MOTOR MFG. CO., Muskegon, Mich. K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

For catalog, address Dept. 16. NORDYKE & MARMON CO. INDIANAPOLIS, IND.

TRUFFAULT-HARTFORD

SHOCK ABSORBER Mark

The Device that made Safe, Speedy and Comfortable Automobiling Possible. Write for catalogue, Department D.

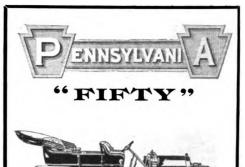
HARTFORD SUSPENSION CO.

E. V. Hartford, Pres. 145 Bay St., Jersey City, N. J.

Address Eastern Inquiries
Garford Motor Car Co.
of New York,
1540 Broadway,
New York City.

Western Inquiries Garford Motor Car Co. of Cleveland, 1372 East 12th St., Cleveland.





The best car that America has yet produced.

Pennsylvania Auto Motor Co. BRYN MAWR, PENNSYLVANIA

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name. Try to remember it when next you are or-dering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.





is equal to any \$1 50 plug. Has big air chamber, protected porcelain, bronze non-sticking bushing, won't leak,—and will outlast two ordinary plugs. At all dealers, or direct to you upon receipt of price—\$1.00.

THIS

THE R. E. HARDY & CO., 25 West 42d St, New York City

To Owners of Cars Costing Over \$1800

Add the neat, snappy little Brush \$500 Runabout to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work.

BRUSH RUNABOUT COMPANY, Detrole



Nuts That Require Tightening After considerable use the bolts driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts COLUMBIA NUT & BOLT CO., Inc., Bridgeport, Conn.





Dealers can make quick sales with this machine. The upkeep is very light; has solid rubber tires; goes through deep mud and sand, and elimbs steep hills. Double cylinder, air cooled, 10-12 H. P. It's your loss if you don't get the agency. Write,

W. H. KIBLINGER CO.,

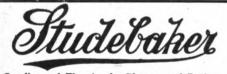
Box 250.

AUBURN, IND.

Apperson Policy

"QUALITY NOT QUANTITY"
If you want a good car write us

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.



Gasoline and Electric—for Pleasure and Business Studebaker Automobile Co., South Bend, Indiana

Continental Roady-Flatod Tires. They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY

1788-1790 Broadway, cor. 58th St. New York City.

"Keep your eye on Continentals"

SPRINGFIELD
TOP (Pat. 1895)
Aluminum
Bodies
SPRINGFIELD
METAL BODY CO.,
366 Birnie Ave.,
Springfield, Mass.





Steel Tires

Full of Air.
Tire expense cut in two.

Cannot Blow Out
Rim Cut
or Puncture

As Flexible as Rubber Anti-Skid

Thousands in use.

Kimball Tire Gase Co.
172 Broadway
Council Bluffe, Iowa

SMITH AXLES

For Light Runabouts

TYPE "C" REAR AXLE

Bevel Cear Drive Roller and Ball Bearings Internal Expansion Brakes

Drawings and Prices on Request.

A. O. SMITH CO.
243 Clinton Street, MILWAUKEE



TWO LIVE ONES THAT YOU CANNOT MISS "CENTER-FIRE" PLUGS AND DECARBONIZER This Compound removes Carbon from all parts of gas engine in a chemical and Harmless Way. Increases

This Compound removes Carbon from all parts of gas engine in a chemical and Harmless Way. Increases power 20 per cent. Sample Cans \$1.50. Center Fire Plugs fire charge in center of compression, add power to engine and never smut. Special Price \$1.00.

General Accumulator & Battery Go. 140 Second Street MILWAUKEE, - WIS.

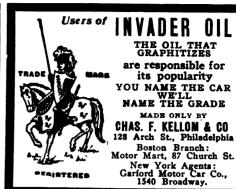




THE INDEX

Built to outwear an auto, and it will Send for Booklet Index Speed Indicator Co.

MINNRAPOLIS, MINN.





For catalogues, address
THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS.

TOPEKA, KANSAS

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO., Cleveland, Ohio.

THE THOMAS

America's Champion in the New York-Paris Race.

Send for map and route card.

E. R. THOMAS MOTOR COMPANY

BUFFALO, N. Y.

Member A. L. A. M.

THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to
The Motor World

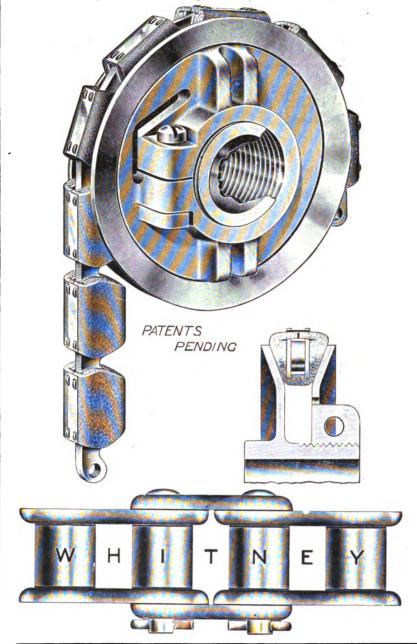
for one year, commencing with the issue of Name

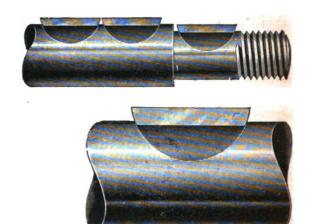
Address

Digitized by Google

NEW "WHITNEY" CHAIN

For Cooling Fans, Oiling Devices, Motorcycles, Etc.





If you are not taking advantage of the Woodruff Patent System of Keying it will pay you to investigate.

Better results and a great saving in cost.

We carry 95 regular sizes of Keys and Cutters in stock for immediate delivery.

"Whitney" Patent Cotter **Detachable Roller Chains**

Made a fine record in the Briarcliff Road Race.

THE WHITNEY MFG. COMPANY, Hartford, Conn.

New York City, May 2, 1908.

Gentlemen—The uniform strength of an automobile driving chain is one of the important requisites in a speed

The "Whitney" Chains which formed a part of the equipment on our three "Stearns" Cars in the recent Briarcliff Stock Car Road Race, showed their superiority by coming through this exceptionally difficult contest without the slightest evidence of the terrific strain which they had undergone. Our "Stearns" Cars made an exceptional showing in this race, and we attribute our success in no small degree to the entire absence of chain trouble.

Our experience in previous contests has taught us that a faulty chain can cause a lot of trouble.

We therefore take this opportunity to express the satisfaction which we feel at the manner in which "Whitney" Chains demonstrated their worth

Yours very truly,

WYCKOFF, CHURCH & PARTRIDGE,

By C. F. Wyckoff, President. Chains demonstrated their worth.

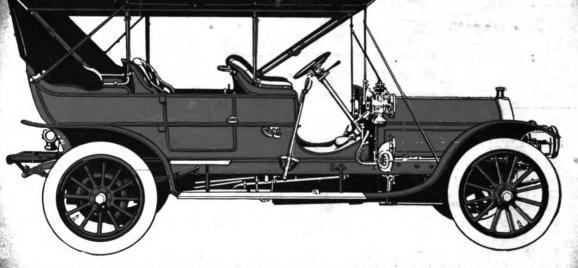
THE WHITNEY MANUFACTURING COMPANY, Hartford, Conn.

trade paper giving the orld's Motor News

Ten cents a copy— Two dollars ayear

The Last Word in GREAT ARROW

Car Construction is LUXURY



A motor car is a pleasure vehicle, and the more comfortable we can make it, the more nearly it becomes the ideal pleasure vehicle, and comfort, luxury, the sensation of gliding rather than being propelled by machinery, are the results attained in the six-cylinder GREAT ARROW.

HERE ARE THE

4-cylinder Great Arrow, 30 H. P., Price, \$4,000
4-cylinder Great Arrow, 40 H. P., Price, \$5,000
6-cylinder Great Arrow, 40 H. P., Price, \$5,500
6-cylinder Great Arrow, 60 H. P., Price, \$6,500

THE GEORGE N. PIERCE COMPANY,

Members A. L. A. M.

BUFFALO, N. Y.

Digitized by GOOR 6

THE WINNING CAR

in most really notable automobile events, is equipped with Harford Tires.

This is a fact that should be most significant to the man who buys tires.

It proves that the men who really know, and who have learned, perhaps by bitter defeat and disappointment, that the best, and the best only, is real economy, recognize in Hartford Tires the highest standard of quality.

¶ The Philadelphia North American, of June 14, speaking editorially of the winning car at Point Breeze track, June 13th, says: "Tire trouble of the slightest kind would have meant defeat, but the Hartford Tires on the machine did their work nobly."

¶And so the story goes—ever and always success on Hartford Tires.

Get them on YOUR car.

Hartford Tires



"The tire with the doubt and the risk left out"



are always the same in quality. All one grade—the best, and the trade marks here reproduced are your guarantee and protection.

Hartford Tires and Hartford Tubes

the world's best for quality, resiliency, durability and satisfaction.

THE HARTFORD RUBBER WORKS COMPANY

HARTFORD, CONNECTICUT

BRANCHES—NEW YORK, 57th St. and Broadway; CHICAGO, 83 Michigan Ave.; BOSTON, 817 Boylston St.; DETROIT, 256 Jefferson Ave.; DENVER, 1564 Broadway; PHILADELPHIA, 1425 Vine St.; ATLANTA, GA., 94 North Pryor St.; BUFFALO, 725 Main St.; CLEVELAND, 1831

Euclid Ave.

AGENCIES—Pierson-Wilcox Elec. Co., Minneapolis; Mercantile Lumber and Supply Co., Kansas City; St. Louis Tire Agency, St. Louis, Mo.; Chanslor & Lyon Motor Supply Co., 930 S. Main St., Los Angeles, Cal.; 542 Golden Gate Ave., San Francisco, Cal.; F. P. Keenan Co., Portland, Ore.; Compania Mexicana de Vehiculos Electricos, City of Mexico.



He'll get you sure!

YOU CAN'T ESCAPE!

There's only one way out of it—you cannot "protect" against the puncture devil, even by overloading your wheels with heavy armor which destroy the resiliency of your tires.

Why not meet your puncture face to face and when he stabs your tire, laugh him to scorn—produce your

STEPNEY SPARE WHEEL

and be on your way in less than a minute.

The Stepney Spare Wheel clamps to the rim of your wheel without removing your punctured tire.

When you finish your journey remove the Stepney and repair the puncture.

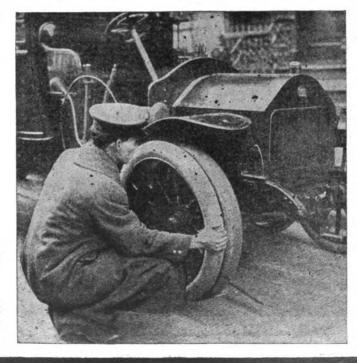
WRITE FOR DESCRIPTIVE MATTER, PRICES, ETC.

THE SPARE MOTOR WHEEL OF AMERICA

(Limited)

CHICAGO 236 Michigan Ave NEW YORK OFFICE 341 Fifth Avenue

Write for our catalogue B.









AVOID ACCIDENTS

by using the

Wridgway No Glare Shade

which adds to the efficiency of the lamps, and keeps glare from blinding other users of the highways. Can be fitted to any existing lamp.

Peerless Motor Car Co, w. 41st Street. New York



234 Walnut Street,

Every big motor event that has taken place in the past three or four years has seen more Auto-Meters in evidence than all other makes of speed indicators combined.

In the Glidden Tours the number of Auto-Meters used by contestants doubled and tripled all other makes put to-gether.

In the New York-Paris Race the only speed indicator is a Warner on the Thomas car.

Nearly all the automobile manufacturers of the country use the Warner to test out their

use the Warner to test out their cars before they leave the factory.

Massillon, Ohio, U. S. A.

Two of the most successful makers are including the Warner as part of their regular equipment.

Aren't these facts rather significant—don't they mean anything to you?

Send for our new book, "The Final Truth About Speed Indica-

Warner Instrument Co.

207 Wheeler Ave., Beleit, Wis.



Large Sales

make it possible for us to import THE CELEBRATED BRAMPTON CHAINS from ENGLAND (paying freight and duty), and sell them at the same price at which the several other automobile chains are sold to manufacturers, jobbers, dealers and users.

THE BRAMPTON MOTOR CHAIN



All side plates on both sides on the Brampton Chain are stamped "BRAMPTON."

LARGE SALES and SMALL PROFIT with thousands of satisfied customers is our beat advertisement.

THE BRAMPTON CHAIN is made of helf-hardening Steel; the strongest Chain in the World. All parts polished; fits sprockets (that are properly cut) without friction.

Some of the other chains may look like THE CELEBRATED BRAMPTON CHAIN because some of the other chain makers began to copy the design and shape of the BRAMPTON CHAIN links in 1904. They have improved somewhat on their copied design from time to time until these chains now look more like the BRAMPTON CHAIN than ever before. These chains somewhat resemble the BRAMPTON in appearance, but the manufacturers of such chains have been unable to copy the material-self-hardening steel.

NO CHANGE IN THE BRAMPTON

There has been no change in the design, construction, material or finish of the BRAMPTON MOTOR CHAIN in the past ten years.—"ENUF SED."

PRICE

The price being equal, it's presumable you want the best, and full value for your money. In such cases, the BRAMP-TON FILLS THE BILL, and the prices are the same to manufacturers, jobbers, dealers and consumers as any other chain of equal size—as follows:

CHAINS TO FIT AMERICAN CARS

 1 x 3/4 x 9-16—1 x 1/2 x 5/6—1 x 1/2 x 9-16 roller
 \$1.00 per foot.

 1 x 5/6 x 5/6 roller
 1.17 "

 1 1/4 x 1/2 x 5/6—1 1/4 x 5/6 x 5/6—1 1/4 x 5/6 x 3/4 roller
 1.25 "

 We also carry in stock the BRAMPTON CHAINS to fit Foreign Cars—Mercedes, Panhard, Martini, Fiat, etc.

Your 1908 Car

You can have the new car that you order fitted with the CELEBRATED BRAMPTON CHAIN if you order it that way. No extra cost to either you or the manufacturer. All standard sizes in stock to fit American and Foreign Cars at the same price as the other chains.

SPECIAL CHAINS TO FIT THE INDIAN MOTORCYCLE.

Agents wanted in unoccupied territory. Catalog on request.

We are Sole American Agents for BRAMPTON CHAINS, and they cannot be bought from anyone else except through



Pan-American Automobile Body Polish

Pan-American Polish was awarded the Bronze Medal at the Louisiana Purchase Exposition at St. Louis, 1904. This polish has been carefully prepared for the Automobile trade. It is also applicable to the carriage trade, or can be used on any varnished furniture or woodwork of any kind. It will remove stains, cover scratches: leaves the automobile with its original new lustre, without being sticky or greasy. Furnished in eight-ounce bottles. Guarantéed not to harm the finest varnish. For sale by all Automobile Dealers. Price 60 cents per bottle.

The Miller Automobile Jack

The Miller Automobile Jack is a quick acting, automatic lowering jack, designed especially for automobile use, and is adapted to the factory or garage as well as to be carried as a part of the equipment on motor cars. It is high-grade and one of the finest finished jacks on the market. We guarantee this jack for twelve months. The list price of the Miller Jack, \$3.50 each.

CHAS. E. MILLER

Manufacturer, Jobber, Exporter and Importer

Home Office: 97-99-101 Reade Street, New York

318-320 N. Broad St., Philadelphia, Pa. 1829 Euclid Ave., Cleveland, O. 824Main St., Buffalo. 2271/2-229 Jefferson Ave., Detroit. 1892 Bedford Ave., Brooklyn, N. Y. Branches: 54th St. and 8th Ave., New York. 202-204 Columbus Ave., Boston, Mass.

Rimpire Tires WEAR LONGEST

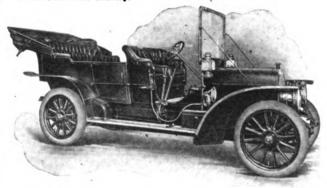
EMPIRE AUTOMOBILE TIRE COMPANY.

TRENTON, N. J.

New York, 148 Chambers St., and Broadway and 73d St.; Boston, 292 Devonshire St.; Buffalo, 724 Main St.; Fobes Auto Supply Co., Providence, R. I.; Chicago, 1301 Michigan Ave.; Atlanta, Ga., Dunham Rubber Co.; Denver Auto Goods Co., Denver, Colo; Penn Auto Supply Co., Philadelphia, Pa.; Savell Rubber Co., Jacksonville, Fla.



Write for our complete catalogue and book of customers' letters. How well we have succeeded in building the best motor car in all the world is told by our customers themselves, who, as a class, are the most prominent men of affairs in this country.



DEALERS—New York City, A. G. Southworth Co., 1733 Broadway; Boston, Mass., Matheson Co. of Boston, 1230 Massachusetts Ave., Cambridge, Mass.; Philadelphia, Pa., Noblit & Fassitt, cor. Broad & Cherry Sts.; Pittsburg, Pa., Matheson Agency, 41 Leader Building; Baltimore, Md., Matheson Co. of Maryland, 1002 Morton St.; San Francisco, Cal., Matheson Co. of California, 442 Golden Gate Ave.; St. Louis, Mo., South Side Auto Co., 2339 S. Grand Ave.; Albany, N. Y., Albany Garage Company, 28-30 Howard St.; Binghamton, N. Y., H. D. Clinton Auto Co.; Fort Wayne, Ind., Straus Bros. & Company; Middletown, N. Y., Empire Garage Company; Portland, Ore., H. L. Keats Auto Company, 80-82 Seventh St.; Rochester, N. Y., Rochester Automobile Company; Williamsport, Pa., Rothfuss-Howard Iron Works; Long Branch N. J., Long Branch Auto Co.

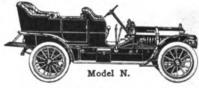
Dealers are wanted in all localities where we are not now represented.

MATHESON MOTOR CAR CO., MAKERS, Wilkes-Barre, Pa.

Licensed under Selden Patent.

Motor Cars

afford the purchaser the very best value to be had on the market at present. All Nationals are equipped with Ball Bearings throughout, including the motor.



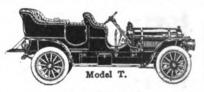
Model K-4 cyl., 4% x 5 \$3,500

Model N — 4 eyl., 5 x 5 \$3,700

All Nationals have two complete systems of ignition.

Model R - 6 cyl., 4½ x4¾ \$4,200

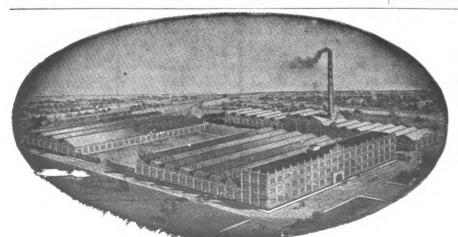
Model T — 6 eyl., 5 x 5 \$5.000



Write for particulars and our Booklet "What Owners Say About Their Nationals."

National Motor Vehicle Co.

1007 E. 22d Street INDIANAPOLIS, IND.



The output of complete Front and Rear Automobile Axles of this plant exceeds the capacity of all competition combined.

THE American Ball-Bearing Co.

L. S. & M. S. Ry. & Edgwater Park CLEVELAND, OHIO, U.S.A.

To Sum Up-

Solar Motor Lamps are superior to those of other manufacture for the following reasons:



(1) The internal method of screw assembling insures a perfectly smooth exterior. (2) All parts are interchangeable. (3) They have fewer parts. (4) Are more simple in construction. (5) Less solder is used. (6) The brass has more "body"—they are heavier and more durable. (7) They are better in design. (8) Special B & L Solar short focus Mangin Mirrors are used and each lamp is tested for accuracy of focus. The highest efficiency as regards lighting is assured.

No detail is overlooked in the construction of Solar Lamps. The Solar Nameplate is a positive guarantee to the user that he has the best in lighting equipment.

Write for a copy of our 1908 catalog.



YOU ARE NOT EXPERIMENTING

when you buy

"LONG-ARM" FRONT AXLES



An up-to-date line, correct design, good material, careful workmanship.

Weldless I-beam with spring pads forged integral for the heavier types, now in use on prominent American cars. Also lighter I-beam and tubular Axles.

You have a choice in bearing equipment too.

Our facilities enable us to make prompt deliveries and prices that will interest you.

THE "LONG-ARM" SYSTEM CO. CLEVELAND, OHIO

Sales Dept., AMERICAN DISTRIBUTING CO., Cleveland, O.

PADAX WRAPPED TREAD TIRES

AJAX— The tire that proved a pneumatic tire can be made so good, so sure in service-results its maker can guarantee it for 5,000 miles -and not go broke. We don't know any other pneumatic tire that can be guaranteed for any definite time or distance: but we do know AJAX can be —and make good ninety-nine per cent of the time. For the other one per cent you get tire insurance and we get

Write for copy of Guarantee, stating what size tire you are using.

Address Dept. A.

AJAX-GRIEB RUBBER COMPANY

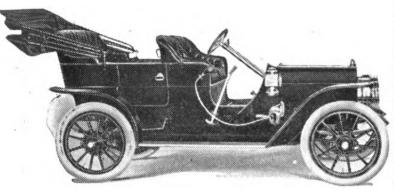
your trade.

GENERAL OFFICES: N. E. Cor. 57th St. and Broadway, New York.
Factories: Trenton, N. J.

BRANCHES:
New York, 1776 Broadway
Boston, 819-a Boylston St.
Chicago, 1418 Michigan Ave.
Detroit, 743 Woodward Ave.
Agents in all large cities.

BRANCHES:
Denver, 1529 Cleveland Place Seattle, 1102 Broadway
Los Angeles, 1040 S. Main St.

OAKLAND



Model B Touring Car, price \$1,350.00. Full equipment, including two gas lamps, two side oil lamps, one tail lamp, generators, horn, tools, jack, pump and batteries. Top, \$75.00 extra. Runabout, \$1,300.

A combination of simplicity and efficiency designed for the man who scrutinizes the car he is to buy, who intends to himself operate it, and to whom economy in up-keep and running expense

I The live agent will find in the Oakland a car that appeals to a large and intelligent class of purchasers and that will justify the fullest confidence.

Correspondence invited.

OAKLAND MOTOR CAR CO., Pontiac, Mich.

J. B. ECCLESTON, Sales Manager, 53 Franklin St., Buffalo, N. Y.

PALMER_SINGER

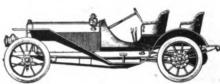
No. 18 Palmer-Singer Six-Fifty. Racing Car 6 Cylinder, 60 H. P.

\$2,450

Palmer-Singer Four-Thirty Skimabout 4 Cylinder, 28-30 H. P. \$1,950

All cars sold by us are licensed under Selden patents AND GUARANTEED FOR ONE YEAR

Palmer-Singer Four-Forty Seven-Passenger Touring Car 40 H. P. \$4,000



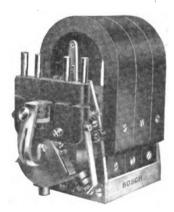
Palmer-Singer Town Country Car 28-30 H. P. \$3,000

Palmer-Singer Six-Sixty, \$2,850

The Sixty-Six is a touring runabout capable of record-breaking speed and still of carrying three or more passengers with perfect comfort on long and hard runs. It will far outdistance and outwear any car of its class at even \$2,000 more in price.

Metropolitan Distributors the SELDEN Palmer & Singer Mfg. Co. 1620-22-24 Broadway, New York 1321 Michigan Avenue, Chicago

120 Miles an Hour with Bosch Magneto



NAZZARO, driving a 175 "horse" Fiat on the Brooklands Automobile Track, London, England, traveled two and three-quarters miles at the rate of 120 miles an hour. This is without question the most wonderful speed demonstration known to the world.

Perfect ignition was largely responsible for the placing of this new record. Naturally the BOSCH MAGNETO was used. The better class of motor cars all over the world are equipped with the Bosch System of Ignition.

> **BOSCH MAGNETO COMPANY** ■160 West 65th Street, NEW YORK

THE K-W MAGNETO

Has bracket as shown for attaching to frame of car. Made especially

For Ford Runabouts

Good on any car.

High in Quality—Low In Cost Perfectly Reliable—Easy to Apply More Power-Less Fuel



It starts the engine easily without batteries and runs it faster and better than any battery because it gives a notter spark. They run in ball bearings and have no moving wires or brushes to give trouble and wear out. They are made to last and they do last. They are the cheapest that is good and there is nothing better at any price.

We also make high grade Coils and Plugs and the K-W Master Vibrator. Get our catalogue.

THE K-W IGNITION COMPANY 38 Power Avenue, CLEVELAND, OHIO

REPRESENTATIVES:

A. H. GREEN & CO., 1686 Broadway, New York.

W. J. FORBES, 220 Congress St., Boston, Mass.

Packard Enameled IGNITION CABLE

Is Always of One Quality, THE BEST



If you want a cable with LOW FIRST COST you will be wasting time and postage by writing to us. If, however, you want a cable that is ABSOLUTELY GUARANTEED to be RELIABLE AND PERMANENT you cannot afford to overlook our product.

MADE ESPECIALLY FOR AUTOMOBILE AND MOTOR BOAT SERVICE.

GUARANTEED HEAT, GREASE, OIL AND WATER PROOF. Samples and Prices on Request.

THE PACKARD ELECTRIC CO., Warren, Ohio

PARSONS' MANGANESE BRONZE LEVER CASTINGS



le Makers THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY, Philadelphia, Penna.

We now have in stock the new A. L. A. M. Standard Rod and Yoke Ends, both the adjustable and plain patterns, either blanks or milled. Send for new circular with full particulars.

THE BILLINGS & SPENCER CO., Hartford, Conn.



and SPRING COMFORT.

Shocks, jolts and jars are injurious alike to man and cars. They can be prevented by the use of Supplementary Spiral Springs, one of the simplest, most effective and inexpensive devices ever produced. Can be readily attached to any car. Thousands in use, and their users consider themselves among the 'wise ones.'

Let us send you our interesting booklet, and ask your dealer about them.

SUPPLEMENTARY SPIRAL SPRING CO.,

4555 Delmar Avenue, St. Louis, Mo. New York Branch—Removed to Motor Mart Building (Larger Quarters)

ADDRESSES—Chicago, 1712 Michigan Ave.; Boston, 889 Boylston St.; Los Angeles, 512 So. Broadway; San Francisco, 424-446 Stanyan St.

For Antomobile Bodies, Dashes, Guards, Bonnets, Battery Boxes, Drip Pans, Mufflers, Etc.

> TRONG-DURABLE ALELESS—RUSTLESS MOOTH-PAINT ADHERES FIRMLY

A Metal That's A Time and Money Saver THE STARK ROLLING MILL COMPANY, CANTON, OHIO

MOTOR MAKERS



Indeed we are. We are still making motors for some of the most successful cars upon the market. Quality before price and both right.

Model "W" 1909

4 x 4, 25 h. p.

This motor is fully equipped with self contained oiling system, Magneto attachment, Fan and Carburetor. The same high grade material and workmanship that distinguishes our manufactured products will be found in this motor.

Prices reasonable. Write for catalog and full information.

THE WESTERN MOTOR CO., Logansport, Ind.

Manufacturers of "Rutenber" Motors, "Rutenber" Carburetors, and Supplies. Light Soft Gray Iron, Brass and Aluminum Castings.

IF YOU ARE INTERESTED IN MOTORCYCLES The Bicycling World and Motorcycle Review

WILL INTEREST YOU

PUBLISHED EVERY SATURDAY AT 154 NASSAU STREET, NEW YORK

\$2.00 Per Year

Specimen Copies Gratis



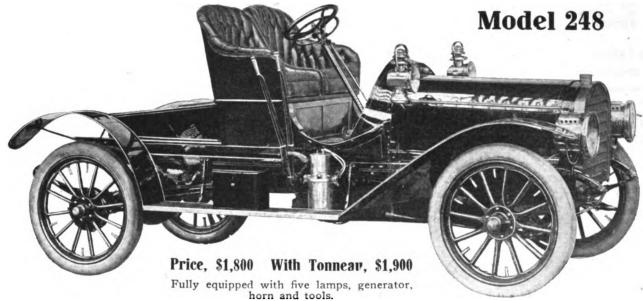
Just to Satisfy

SPLITDORF Common Sense Plug

is a mighty good Plug; use one in your engine. You will find it gives better ignition than any other Plug. Price, \$1.25.

U. F. SPLITDORF, Walton Ave. 4 138th St., NEW YORK





Here is an Unusual Car!

FOUR cylinders; full 30 horsepower; adjustable roller bearing transmission; transmission gears made of special steel that will neither mar nor chip; floating type rear axle; full elliptic rear springs.

With tonneau, a complete touring car; full size; five passenger capacity; 108-inch wheel base; 34-inch wheels and 4-inch tires.

Quiet, powerful, flexible and handsome.

Tested by three seasons' continuous service and perfected by the knowledge gained from twelve thousand Ramblers in daily use.

Where else can you obtain similar value—size, power, efficiency, reliability, appearance and comfort?

Write today for the special 248 catalog and complete particulars

Thomas B. Jeffery & Company

Main Office and Factory: KENOSHA, WIS.

Branches and Distributing Agencies: Chicago, Milwaukee, Boston, Philadelphia, San Francisco

Volume XVIII.

New York, U. S. A., Thursday, June 25, 1908.

No. 13

SECOND SHOW IS IN ABEYANCE

Arrangements Practically Settled, but Final Action Awaits Miles's Return—Manager Reeves Falls Ill.

On his return from a western visit last week, Alfred Reeves, general manager of the American Motor Car Manufacturers' Association, reported that arrangements for the organization's show in Chicago next winter had been "practically settled," which would indicate that Chicago has small prospect of escaping the two-shows situation that has afflicted New York during the past several years.

Reeves stated that according to present plans the show will be housed in the Exposition Building, Forty-third and Halstead streets, which affords 146,000 square feet of space-more than twice as much as is afforded by any other building in either Chicago or New York. It was added that the Association's show committee would go to Chicago early next month to complete the final arrangements; but a statement issued the next day suggests that the second show is not a certainty, by any means, and that nothing further will be done until the return from abroad of S. A. Miles, manager of the established show in the Chicago Coliseum, in which the licensed and the unlicensed manufacturers have dwelt in peace for one week of each of several years.

Miles is expected to arrive almost any day and it may prove that the "second show movement" is but an adroit bit of cleverly planned strategy. Information on the point is, however, not obtainable, as the day after issuing his last statement Reeves was stricken with appendicitis, and to the distress of his many friends, he was forced to undergo an operation. At last accounts, however, he was doing well, and with every prospect of an early recovery.

During his western trip Reeves visited a number of factories and reported that almost without an exception they are operating full time, and that work on the 1909 models is well advanced.

Fire Destroys Shelby Tube Plant.

The plant of the Shelby Steel Tube Co. at Shelby, Ohio, which was the property of the National Tube Co., which in turn is owned by the United States Steel Corporation, was totally destroyed by fire on Thursday night last, 18th inst. As the plant had been shut down for several months, the cause of the fire is a mystery. The flames spread so rapidly that they had consumed the property before the engines summoned from neighboring towns arrived. The loss is estimated to be \$2,000,000.

Court Extends Pope-Toledo Time.

Judge Robert W. Taylor, of the United States Circuit Court for the Ohio district, extended the time for filing creditors' claims against the Pope Motor Car Co. to July 15th, when Irving Belford, as special master, will consider the eligibility of the claimants for sharing in the settlement of the company's affairs. Claims aggregating \$300,000 already have been filed with the special master.

Alexander to Compete with Elyea.

W. D. Alexander, formerly of the Alexander-Elyea Co., Atlanta, Ga., who took over the firm's Jacksonville (Fla.) branch when he and Alexander recently parted company, is preparing to establish a jobbing house of his own in Atlanta in competition with his former partner. Alexander is at present in New York purchasing stock. Elyea, it will be recalled, is now doing business as the Elyea-Austell Co.

Thomas-Detroit is Now Chalmers-Detroit.

The title of the E. R. Thomas Detroit Co. has been changed to Chalmers-Detroit Motor Co., taking its name from its new president. The style of the company's newest product, a four cylinder, 24 horsepower car, listing at \$1,500, similarly will be known as the Chalmers-Detroit.

LAMP MANUFACTURERS TO CONFER

To Get Together in Detroit To-morrow to Correct Abuses—Jobbers' Status Likely to be Defined.

Following the M. A. M. policy of promoting better understanding and to correct the far reaching abuses that have sprung from fictitious list prices and discounts, the lamp manufacturers who are contained within the membership of the Motor and Accessory Manufacturers, Inc., will hold a conference to-morrow at Hotel Pontchartrain, Detroit.

The attitude of the lamp makers respecting discounts differs, however, from that of the M. A. M. tire producing group who were first to engage in such a conference. The lamp men are in favor of increasing the dealer's discount and decreasing that of the jobber, and of more specifically defining the status of the latter. One prominent lamp manufacturer is known to be in favor of allowing the jobber but 10 per cent. more than is given the dealer, the jobbing discount to apply only to those houses that issue a catalog in which is actually listed the goods on which the discount is named. In other words, no catalog, no discount. According to this manufacturer's views, jobbers should be required not to sell at less than dealers' prices. These opinions, of course, reflect the ideas of but one man. What the Detroit conference will do in the matter remains to be seen.

Nally to Manage Lockport's Branch.

C. F. U. Kelly, president of the new Lockport Rubber Co., announced last week that D. B. Nally, the New York representative of the Continental Rubber Works, will join the Lockport company's staff on September 1st next. Nally, who is a big, genial soul with a knack of making friends, will have charge of the branch which the Lockport Rubber Co. will shortly establish in New York City.

In the Retail World.

The Austin Automobile Co. has opened a branch at 1420 Michigan avenue, Chicago. It is in charge of George L. Adams.

The Oldsmobile Co., Spokane, Wash., has leased the premises 107-109 East Sprague avenue, which will be used as a sales room and garage. It is a brick building, 40 by 75 feet.

E. W. Bender has under construction on West Seventh street, Los Angeles, Cal., a modern fireproof garage and repair shop. It is near his present location between Alarado and Lake streets.

W. L. Loos, who for several years has been manager for John T. Bill & Co., at Los Angeles, Cal., is to open an establishment of his own at Oakland. He will handle the Reo cars and the R-S motorcycles.

I. R. Campbell, president of the Campbell Auto Co., which has garages at Albia and Fort Dodge, Ia., has opened one of the most complete automobile establishments in Des Moines, at 309-311 East Walnut street. He will handle Rambler cars.

Burlington, Ia., congratulates itself upon the establishment of the Burlington Auto and Supply Co., which has opened a garage at 309 Front street, to hire out automobiles, deal in supplies and do automobile repairing. Warren Beckwith is manager.

Franklin Martin and T. G. Conway, Jr., of South Orange, N. J., have formed a co-partnership to conduct the Marco Garage in that town. They purpose incorporating as a company. Plans have been approved for a one-story garage, 50x150 feet, at 62 South Orange avenue. It will be built of concrete blocks.

Colonel F. C. Fenner has bought the interest of C. A. Hawkins, of San Francisco, in the White Garage at Los Angeles, Cal., and has become president of the company, which takes over the White agency in that part of the country. Captain H. D. Ryus remains in charge and holds the position of vice-president and manager. The two officers, with C. W. Ryus and Henry Bixby, are trustees.

Nicholas Bechtel, of Cambridge, Mass., has been trying ever since 1906 to get permission from the city authorities to build and maintain a public garage on Harvard street, near Dana, in that portion of the city known as Dana Hill. The aldermen voted down the proposition each year until the present, when they voted, 6 to 5, in favor of granting the privilege. And now Mayor Wardwell interposes a veto.

The Week's Incorporations.

Worcester, Mass.—Macker-Tyler Co., under Massachusetts laws, with \$1,000 capital; to deal in automobiles. Corporators—Melvin A. Macker, Oliver P. Tyler, Frederic T. Sanford.

Niagara Falls, N. Y.—Frontenac Garage Co., under New York laws, with \$10,000 capital; to deal in and repair automobiles.

Corporators—Eugene Cary, Elmer H. Porter, Daniel Burtch, Niagara Falls, N. Y.

Halfmoon, N. Y.—Automobile Co-operative Association of America, The, under New York laws, with \$40,000 capital; to manufacture automobiles and motor boats. Corporators—F. B. Roues. Rutherford, N. J.; William C. Dickerman, and H. H. Williams, New York City.

Dale Reports Good Business Outlook.

According to C. H. Dale, president of the Rubber Goods Mfg. Co., which includes the Hartford, G & J, and Morgan & Wright plants, there has been a sharp improvement in business during the past few weeks, and the outlook is very encouraging. The tire output is larger than it was last year and the only department that shows a large falling off is that furnishing supplies to the railroads. The company's railroad business has a value of \$3,000,000 to \$4,000,000.

"Our business is satisfactory, a decided improvement having taken place in the first weeks of June," says Mr. Dale. "Collections are coming in freely; last week they amounted to about \$1,500,000. In fact money has become almost a glut.

"In view of the cheapness of money I anticipate a marked improvement in general conditions soon. I expect that in August we will see a considerable revival which will be due to the wealth of the country rather than to the probable outcome of the presidential election. The latter of course will have its effect in so far as it is reassuring or not.

"All the plants of the Rubber Goods company are being operated, though not to the limit of last year. I consider the conditions prevailing then as abnormal, however, and in contrast this year's production would be about normal."

· Meteor "Unveils" Its First Product.

The first of the new Meteor four-cylinder cars, the product of the Meteor Motor Car Co., Bettendorf, Iowa, was "unveiled" last week by Ehlers & Duerr, the Davenport (Ia.) agents of the company. The "unveiling" was made quite an event and excited a lot of interest.

Hyde Returns from Visit to Europe.

Arthur H. Hyde, general manager of the Whitlock Coil Pipe Co., Hartford, Conn., returned from Europe this week. He was absent two months during which he combined some business with more pleasure.

Page Begins to Build Runabouts.

The recently incorporated Page Motor Vehicle Co. has commenced operations at its plant, 288 Dyer street. Providence, R. I. It will build a 20 horsepower, four-cylinder runabout.

Blackman Leaves Parish & Bingham.

Charles W. Blackman has resigned as sales manager of the Parish & Bingham Co., Cleveland.

Olds Increasing Facilities.

At present there are more men employed at the Olds Motor Works, at Lansing, Mich., than ever before. According to an authorized statement, there are exactly 375 more men at work than were engaged at the busiest period of 1907, and the number of orders is greater than at any time since the days of the single cylinder runabout.

Several improvements of importance are being made at the factory. One of these is the planking of the half mile track. This track is used for testing purposes and is to be covered with 16-foot plank, two inches thick.' Work is now well under way on this track and when it is completed the Olds Motor Works will have as fine a testing track as there is in the country. Inside the track a base ball diamond has been prepared for the use of the men both in the shop and offices. Several additions are now under way, the largest of these being a new central storehouse. This building, which is now nearly completed, is ninety by one hundred and fifty feet in dimension and is two stories high. Other improvements too, are being pushed rapidly so that there is no delay on 1909 models and the facilities for handling this work are greater than ever

British Trade Shows Continued Decline.

British imports of cars and parts continue to decline. The aggregate importation for the month of May was \$84,605 less than for May, 1907. But 340 cars were imported, of a total value of \$605,640, while the 289 chassis imported were valued at \$531,400. The total value of parts was \$751,-430. The combined total for the month was thus \$1,888,470. A drop in exports also was observable during the month. The 144 cars exported were valued together at \$279,350, while 15 chassis were shipped out of the country, with a combined valuation of \$25.-735. Together with the \$127,550 worth of parts, the total thus amounts to \$432,635. The total exportation for May, 1907, was \$457,905.

Rajah Removes Office to Bloomfield.

On July 1st the Rajah Auto-Supply Co. will remove its office from New York City to Bloomfield, N. J., where the factory is located. The facilities of the plant recently have been considerably enlarged, which will permit of an increased output of the Rajah spark plugs and other specialties.

Brinegar on Annual Eastern Visit.

E. P. Brinegar, of the Pioneer Automobile Co., San Francisco, Pacific Coast agents for the Oldsmobile and Thomas cars. is now in the East. It is in the nature of his annual visit.

Jeffery Starts on Foreign Pleasure Trip.

Thomas B. Jeffery sailed yesterday for an extended trip abroad. Pleasure is the chief purpose of his visit.



APPERSON ADDS A NEW MODEL

Features of Popular Priced Car in Touring or Runabout Form-Increase of Facilities Announced.

Two noteworthy features are embodied in the annual announcement of the Apperson Bros. Automobile Co., both of which are significant of changing times and growing confidence in the strength of the industry. One involves the introduction of "Model O." which is a brand new car, of Apperson build throughout, and listing at \$2,250 with 3 or 4 passenger body, or \$2,400 with 5 passenger touring body. The other statement is to the effect that the manufacturing facilities of the Kokomo factory have been increased to an extent which will make possible an output during the coming year of no less than 1,000 cars.

Model O is a four cylinder machine rated at 30.4 horsepower by the A. L. A. M. formula and built with individually cast cylinders having valves oppositely placed and actuated from cam shafts enclosed within the crank case. The lifters are adjustable for wear and lost motion and the crank case is so arranged that both cam shafts may be withdrawn without disturbing the remainder of the motor. Ignition is by jump spark with storage batteries as the source of primary current, although the high tension magneto equipment will be supplied extra. The carburetter is of origihal design, and has been used by the makers for a number of years.

Transmission is by contracting band clutch and three speed, selective type change gear, a feature of the device being the construction of the gear box, which is built in the form of a solid casting, so arranged that the gears and shafting may be withdrawn without removing a single bolt or nut except those retaining the cover. A further point in its favor is that there are no bolts or nuts inside the case and nothing to work out of adjustment. Needless to say, all bearings are of the ball type. They are noteworthy in that they are of the latest New Departure pattern, however, that is to \$ay, that two rows of balls are employed in each bearing instead of one. The propeller shaft is designed for straight line transmission under normal load.

The more general specifications of the machine include the wheel base, 119 inches; wheels and tires, 34 by 4 inches; springs, semi-elliptical, 40 by 50 inches long, front and rear; clearance, 101/2 to 11 inches under the axles; and brakes, double, internal-external, mounted on the rear wheels. The front axle is drop forged and carries ball mounted steering pivots. The rear axle is of the floating type and is cambred sufficiently so that the rear wheels stand on a "plumb spoke,"

In addition to the new model, the Apper-

son output for the coming year will also include these models which have been built heretofore: "Jack Rabbit;" Model E, 50-55 horsepower, in touring car and 5 passenger runabout styles; Model I, 40-45 horsepower touring car; Model M, 35-40 horsepower, with 3, 4 or 5 passenger bodies; and the 50-55 horsepower 6 cylinder touring car, with 7 passenger body.

Receiver Named for a "Wonder Worker."

On the petition of William Spencer, Charles E. Oelschlager and Frank Kegrize, John L. Burns has been appointed receiver in this jurisdiction for the chemically named CO2 Development Co., of Philadelphia. The defendant concern, together with John E. Carroll, the principal stockholder, was sued for an accounting to all stockholders and for an explanation of the management and development of an invention of Carroll's. The invention related to the use of carbonic acid gas for the generation of motive power for the operation of machinery and vehicles of all descriptions, particularly automobiles and railway cars.

It is charged that Carroll dominated the business of the company, the election of the board of directors and generally ran things to suit himself. It is also charged that while he has maintained a demonstrating apparatus in the company's Philadelphia office, he has repeatedly refused to give proper demonstrations of the value of the invention to proposed investors, and has repeatedly used profane, abusive and offensive language to proposed investors, and as a result of his conduct the company has been attacked by publications in technical, trade and other journals as a fraud and swindle and has been greatly damaged in its reputation and business. Carroll is also charged with having refused to develop the invention or to proceed with any plans for its application to vehicles and machinery.

Chicago Dealers Ask for a Speedway.

The Chicago dealers certainly are not backward in asking for what they want. In a communication to Mayor Busse of that city, Henry Paulman, representing the Chicago Automobile Trade Association, has asked for an automobile speedway on the South Side of that city. In his letter Paulman urges that a street one mile long be designated for the use of the association so that demonstrators of automobiles may show prospective purchasers the power and speed of cars without danger of conflict with the city speed laws. The mayor referred the communication to Commissioner of Streets Hanberg.

Reo Declares a 40 Per Cent Dividend.

The Reo Motor Car Co., Lansing, Mich., has declared another cash dividend of 40 per cent. This is the second dividend of the year, the first of 20 per cent, having been paid on April 18, and makes a total of \$600,-000 paid in dividends, so far this year on a ment has suggested itself as a result of capital stock of \$1,000,000.

PACKARD "THIRTY" FOR 1909

Small Differences Between Latest Model and Its Predecessors-Some Minor Refinements and Their Effects.

"As has been the case during the last few, years, the Packard Motor Car Co., has made only slight alterations in the design in present use in producing the 1909 model, 'Pack-' ard "Thirty," announcement of which was made last week. With one or two exceptions, the differences between the latest: model and its predecessors are not readily observable, but comprise a number of minor refinements such as may be appreciated by those who are intimately acquainted with the machine.

Of the visible indications of this refining process, the most noticeable is the elimination of the small reverse lever, which formerly was employed, in favor of an improved form of single shifting lever, which, though progressively actuated in obtaining the forward speeds, is moved inward in obtaining the reverse. Another new and visible feature is a brace which extends between the two headlight brackets, for purposes of reinforcement. The headlights included in the regular equipment this year, are of Solar make, it should be mentioned incidentally. Still another new feature is the use of a honeycomb radiator instead of the ribbed tubular type employed in the 1908 cars

Improvements pertaining directly to the motor, include the elimination of the idler. gears in the two-to-one mechanism, as a result of which the element of noise is reduced, as well as the number of parts in motion. A centrifugal water pump now is: used, instead of the gear pump, while a special feature of its construction is the hydraulic pressure lubricated, thrust bearing. The crank shaft also has been changed in design at its forward end in such a way that there is no unprotected end protrud-1 ing from the forward part of the case.

As for the running gear, a partial redesign of the steering mechanism has resulted in the placing of the rod connecting' the arm at the base of the steering column; and the knuckles, over, instead of under, the axle as formerly, thus minimizing the jark upon the hands of the driver. It also is to be observed that roller bearings are now! employed in mounting the front wheels. Added to this, a new and improved form of lining is employed in the brake shoes, which is more durable than any yet employed, while a change in the gear reduction from the motor to the ground, makes the latest, type operate in the same ratio as was employed in the 1907 type.

The body design remains much the same as heretofore, except where a minor improvecareful observation.

WHITE WINS

A Partial Summary of Victories, May, 1907-May, 1908

Perfect Score in Harrisburg **Endurance Run**

Tieing with three other cars in the contest of May 5th-6th, 1907. For the result of the "run-off," see below.

Fastest Time in Wilkes-Barre Hill-Climb

Defeating 45 high-powered gasolene cars, in the great contest on Decoration Day, 1907.

Fastest Time in Cleveland Hill-Climb Defeating 40 high-powered gasoline cars.

Fastest Time in California Hill-Climb

Defeating the fastest of its gasoline competitors by nearly two minutes on the $2\frac{7}{8}$ mile hill at Witter.

Perfect Scores in Sealed **Bonnet Contest**

Both White cars entered made perfect scores in this contest conducted by the Automobile Club of America.

Officially Observed Non-stop Run of 1871 Miles

Held under the auspices of the Royal Automobile Club of England and certified by that organization.

Fastest Time of the Season on the Track

One mile in 1:02, ten miles in 12:54, and twenty-five miles in 29:07 at the Santa Rosa Track Meet.

Officially Declared Most Efficient Car

In the South Harting hill-climb, conducted by the Royal Automobile Club, the White won the contest because it developed at the rear wheels a greater percentage of its assigned horsepower than did any other car. The rating assigned to the White was 50 horsepower.

Wins English Dust Trials

Proving officially that it raises less dust than any other car.

Ciean Sweep in the Glidden Tour

Three White entries make three perfect scores.

WRITE FOR LITERATURE

THE WHITE COMPANY, Cleveland, Ohio

NEW YORK CITY, Broadway at 62d St. SAN FRANCISCO, 1460 Market St. PHILADELPHIA, 629-33 N. Broad St. BOSTON, 320 Newbury St. BOSTON, 320 Newbury St. CHICAGO, 240 Michigan Ave.

PITTSBURG, 138-148 Beatty St. CLEVELAND, 407 Rockwell Ave.

Won Hower Trophy

The single White runabout entered in the Glidden Tour defeated a dozen high-priced gasoline runabouts competing for this prize.

Won California Reliability Contest

In the original contest held September 20th, two Whites tied with two gasoline cars. In the "run-off" held November 15th and 16th, both Whites made perfect scores, while both gasoline cars were penalized.

Won Quaker City Endurance Run

In this contest, held January 1st, 2d and 5th, the White vanquished 27 gasoline cars of 23 leading makes, winning the MacDonald & Campbell trophy.

Fastest Time in San Francisco Hill-Climb

Winning the free-for-all, the \$2,500 class and the \$3,500 class.

Fastest Time in the New York **Carnival Hill-Climb**

Making the ascent of Fort George hill in 321/2 seconds, compared with the best gasoline time of 36 seconds; largest entry list of any hill-climb ever held.

New San Francisco-Los Angeles

The White car made the 478-mile mountainous journey in 17 hours and 17 minutes, cutting 56 minutes from the previous

Double Victory in Harrisburg **Endurance Run**

The single White entry was the only touring car to make a perfect score, winning the principal 1908 trophy, the Board of Trade Cup, and also the 1907 prize in a "run-off" with last year's other perfect-score drivers.

Perfect Score in Detroit Endurance Run

Perfect Score in Baltimore Sealed **Mechanism Contest**

Two Perfect Scores in Kansas City **Reliability Run**



Published Every Thursday by

The Motor World Publishing Company

Joseph Goodman, President. R. G. Betts, Treasurer. F. W. Roche. Secretary.

154 Nassau Street NEW YORK, N. Y.

TELEPHONE, 2652 BERKMAN.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE MOTOR WORLD PUBLISHING CO.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address, "MOTORWORLD," NEW YORK.

Entered as second-class matter at the New York Post Office, November, 1900.

NEW YORK, JUNE 25, 1908.

Effect of Automobiles on the Highways.

Nothing can be more offensive to the thinking motorist, just at this time, when public sentiment has become fairly quiescent on the subject of the motor vehicle, than to have the cry raised that the automobile is a destroyer of the public highways. Leaving aside all question as to whether this is actually so or not, the very outcry which is being raised is a confession of the weakness of highway systems, and of the need of improving them to meet present day requirements.

The automobile is an indispensible adjunct to civilization even now. Its use and its indispensibility are fast growing. It is impossible to check its development, or to stifle its use. Why then, is it necessary to proclaim its destructive qualities? Rather it should be said that the roads are becoming insufficient for the demands of modern traffic, in which the automobile is a potent factor and a significant forerunner of other

motor vehicles yet be built, of a huge motor traffic of the future.

The principle involved is self-suggestive when a definition—almost a eulogy of the good road—voiced by Hon. John Bankhead before the United States Senate at its last session, is considered. He said:

"Good roads are avenues of progress, the best proof of intelligence; they aid the social and religious advancement of the people; they increase the value of products; they save time, labor, and money; they are the initial sources of commerce, which swell in great streams, and flow everywhere, distributing the products of our fields, forests, and factories. The highways are the common property of the country, their benefits are shared by all, and they are needed by all; they benefit all, and all should contribute to them."

Although the Senator said nothing about the inequalities of the "contributions" which are imposed, it is a melancholy idea that while we are still struggling to bring a few paltry miles of trunk highway into shape according to the ideals of the day, we find those ideals inadequate to the needs of the day; that when we have finished our good roads, we must turn about and build better ones. But after all it is not a question of building through and through, but of covering and protecting the foundation material with a suitable and durable roof, which is the crucial point. Improvements in that respect, and more thorough and systematic methods of maintaining the public thoroughfares will probably solve the problem for many years to come, if not for all time. In the interim, the automobile is to be regarded as an instrument of enlightenment in this respect rather than as a transgressor, and those who are inclined to disparage it on this account should be silenced before they have reawakened the old, senseless spite against the automobile as a voluntary and aggressive offender.

Speed and Its Bad Influences.

That curious trait of human nature which has been disclosed by the automobile, the overpowering tendency of so very many persons for senseless and unnecessary speed, still remains unexplained. Considering the general subject of transportation methods—and going back but very few years in the consideration—the remembrance is keen to most persons of a day in the not distant past when the main streets of large and important cities were the thoroughfares on which the man of business went to and from

his daily pursuits in a car, drawn by horses, at a speed averaging about four miles an hour. And in that day, there was no great demand for faster time, the call was rather for "more cars."

Cable roads were next introduced and found favor because they furnished a means of travel at a rate of speed more than double that obtained in the horse drawn vehicle. And in turn the cable roads gave way to the trolley cars, which were faster still than their predecessors.

At this period of time men and women had become used to the sensation of what they considered rapid traveling. Often on suburban roads the occupants of trolley cars rode faster than 20 miles an hour, and because of the noise and vibration from the vehicle, it seemed that a high rate of speed had been obtained and human nature was satisfied; there was elation and exhileration in the rapid movement.

Then the automobile came into fairly general use, and soon the daily press contained accounts of arrests for reckless driving, and for speeding within the city limits. From 12, 15 or 20 miles an hour, the accusations took on a more sportive aspect; pleasure seekers were accused of driving their cars at rates of speed varying from 25 to 60 miles per hour, and then the others, the masses, who owned no automobiles, began to wonder what there was about the sensation of rapid traveling that appealed, apparently with irresistible power, to the motorists. The answer to the question has not been given. Why, when on pleasure bent, a car should be driven at a rate of speed that shakes the occupants of it until they have difficulty in maintaining their positions on the seats, why it should be driven at a rate of speed that puts an abnormal strain on the power plant, transmission and, in fact, on all parts, thereby increasing the amount of wear and tear, and decreasing the natural "life" of the vehicle, is beyond the reckoning of normal man, even of those who find their enjoyment in this very practice.

It was but a short time ago that man, going to and from business, was satisfied, maybe perforce, with a rate of travel of four miles an hour, now he requires five times as fast for business purposes and ten times as fast when in the pursuit of pleasure. The tendency is dangerous and should be curbed. The danger lies not alone to the occupants of the speeding car, but to pedestrians and other users of the public highways. The opposition which automobilists have been encountering in legislative

halls, in township boards, and in village offices, largely is due to this fanatical tendency for speed. The bad name which automobilists have in many communities is due to the same cause, and the final freedom from legislative restrictions, from discriminating road taxes and from local ordinances is going to come when the owners of motor cars bring themselves, or are brought to a realization that the pleasure of motoring comes not with the maintenance of a high rate of speed, but rather does it come when one rides at a reasonable pace which permits of the driver and the driven, riding along in a state of physical and mental relaxation which is not possible when it is known that the least unexpected happening may result in death or injuries, and be solely caused by the insatiable desire for insane speed. For the mental strain, so rarely considered, is quite as great as are the physical and mechanical strains.

Contests for Private Owners.

In educational value and in many other respects the contest for the Hagerman trophy, which occurs in St. Louis and vicinity on Saturday next, probably is worth as much as all other similar or nearly similar contests put together. It is a contest restricted to private owners and not, like all others, one monopolized by trade experts. If public performance of the sort is significant, the performance of the private owner should weigh preponderantly with the prospective purchaser who really thinks first and buys afterward.

The Motor World often has urged that more contests of the kind be promoted. In response, some men in the trade have stated that a sufficient number of owners could not be attracted to insure the success of such events. But the fact that there are 25 entrants for the St. Louis contest suggests that the contention is an empty one. Other tradesmen have opposed the idea because they fear that a competing owner may injure the reputation of their cars which is rather "rough" on the cars.

The wonder is that more of the non-trade clubs have not taken the bull by the horns and promoted events for private owners, owning and driving their own cars. It would be in the nature of promoting real sport.

Consistency is a rare jewel. One of the race promoters whose pocketbook apparently was injured by some action of the A.

A. A., and who finds relief for his feelings in an automobile column which he edits, urges that the control of racing be turned over to a party of five men whom he names. one of whom, like himself, nurses a large sore spot. The consistency of the gentleman is rendered gloriously sublime by the fact that for many months he has professed to have been horrified by the discovery, made while standing on his head and gazing at his purse, that the "control" of the A. A. A. is vested in three disinterested men, whose control he well knows is of the most perfunctory character rendered necessary for corporate purposes. Apparently, five men instead of three will undo all the "evil" he has so religiously forced himself to see without the aid of either telescope or magnifying glass.

Now that automobile designers have learned the necessity of employing extremely powerful brakes, it remains to teach the user how to apply them. Under the old order of things no particular "technique" was required in handling the brakes, because even when applied to their full capacity, the effect upon the machine was not immediately evidenced. With the newer types of brake, however, much more skill must be exercised or the entire mechanism of the car will be strained beyond its normal capacity, while the tires will be ruined at an astounding rate. Having developed the perfectly efficient brake, it remains to instruct the driver to use it sparingly.

One of the women of some wealth who induced the spot light to center on her by engaging in automobile competition and who thereby came to be worth her weight in gold to press agents and newspaper photographers, is "dreadfully mad" because the A. A. A. has put up the bars against female racers. She means to try to break down the bars-indeed she does. But probably they will remain in place. Women competitors are entrancing spectacles so long as everything remains lovely. But let one of them be killed or maimed and the outcry and condemnation that rightfully will result speedily will prove the wisdom of the rule that bars them.

Having about passed through that remarkable epidemic which required that every publicity man obtain and circulate photographs of actors, actorines and chorus girls, singly and in groups, taken in

COMING EVENTS

June 24, 25, 26 and 27, Chicago, Ill.—Chicago Motor Club's 1,200 miles reliability run to Dixon, South Bend, Joliet and Chicago.

June 24, 25, 26 and 27, New York and Philadelphia—Monroe County Automobile Association's dual reliability run to Stroudsburg, Pa., and hill climbing contest and carnival at Mount Pocono.

June 27, Minneapolis, Minn.—Minneapolis Automobile Club's annual hill climb.

June 27, Norristown, Pa.—Norristown Automobile Club's hill climbing contest on Skippack hill.

June 30, Rockville, Conn.—Rockville Automobile Club's hill climbing contest on Ned England hill.

July 34, Wildwood, N. J.—Motor Club of Wildwood's annual automobile carnival.

July 4, Pueblo, Col.—State Fair Association's meet at fair grounds track.

July 4, Glens Falls, N. Y.—25 miles stock car race at mile track.

July 4, Baltimore, Md.—Motor Car Racing Association's meet at Pimlico track.

July 4, Long Branch, N. J.—Elkwood Park Automobile Association's meet at Elkwood Park track.

July 4, Cape May, N. J.—Quaker City Motor Club's race meet and carnival.

July 9. Buffalo, N. Y.—Start of American Automobile Association's annual reliability touring contest for the Glidden and Hower trophies.

July 15, St. Paul. Minn.—Automobile Club of St. Paul's meet at Hamline track.

July 15, Huntington, N. Y.—Huntington Automobile Club's carnival and races.

December 31-January 7, New York City—American Motor Car Manufacturers' Association's annual show in Grand Central Palace.

the particular motor car represented by each respective press agent, we beseech that enterprising profession to save us from a further deluge of portraits of the presidential nominees and their wives, children, cousins and aunts. Since the political pot commenced to boil, we have received something less than one hundred protographs of Messrs. Taft and Bryan, not to mention other candidates, seated, standing and otherwise disposed in various automobiles. It has been in the nature of an "embarrassment of riches." Such pictures have lost the charm of novelty and no longer serve any real purpose. It is time for the publicity men to turn their energies and enterprise in other directions.

REAL RACING AT READVILLE MEET

Grant Captures Two Events—De Palma
Puts Oldfield in Eclipse—Christie
Best in Time Trials.

When it is said that H. F. Grant, driving a 45 horsepower Berliet, won most of the prizes at the postponed race meet of the Bay State Automobile Association, held at the Readville track, Boston, on Wednesday of last week, 17th inst., this must not be too literally construed. Grant was the only driver to take two firsts, so evenly were the events contested. The other first prize winners were L. B. Lorimer, Thomas; Stan-

heat. This brought Grant, De Palma and Lorimer together for the 20 miles final, which was a pretty race. Grant nosed his way to the front at the start with De Palma a close second. This order was maintained until the finish, the first named winning by a hundred yards.

There were only two entries in the two miles event for cars of 40 horsepower or less, and Lorimer edged away from Synder, Oldsmobile, early in the race, and lapped him in the 17th mile. The time was 21:56%.

All the crack drivers came together for the first time in the 5 miles free-for-all for runabouts, and it was decided to run this in heats, one in each to qualify and the second in the fastest heat, to get in the final.



H. F. GRANT (BERLIET), WINNER OF TWO EVENTS AT READVILLE

ley Webster, Stoddard-Dayton, and Ralph De Palma, Allen-Kingston, the latter making his debut at track driving. Although no records were broken fast times were made in all the events, and the big crowd—as large as any that have ever attended a Readville race meet—enthused over a well managed and interesting meet.

Grant drove a most consistent race in the 20 miles event for stripped gasolene stock chassis, covering the distance in 20:281/5, without varying three seconds on his time for any of the miles. This event was run in two heats of five miles each and in the first De Palma, Oldfield and Dunham, the latter driving a Corbin, came together. De Palma was really the sensation of the meet and when he opened up a lead on Barney Oldfield and simply walked away from the former track champion the crowd howled, while Oldfield was disgusted. Grant, Berliet; Lorimer, Thomas, and Andrews, American, contested the second heat and it went to Grant without any trouble, Lorimer getting a place in the final by making better time than had Oldfield in the first

Oldfield took the first heat, but De Palma clung to him all the way and got in the final. The second heat had Lorimer, Wing and Andrews in it, and Lorimer got the jump at the start and with Wing in close pursuit the pair fought it out to the finish. The final heat brought De Palma, Oldfield and Lorimer together, and this was perhaps, the finest race of the day. The cars kept together all the way until the last stretch, when De Palma in a great burst of speed passed Lorimer and Oldfield. The latter tried hard to come back with a sprint, but the new crack was not to be denied and he won his first track race. De Palma is an oldtime bicycle and motorcycle crack, who after nearly five years of earnest and constant pleading, recently had lifted a term of indefinite suspension imposed for a lapse he had committed in a motorcycle race.

Because he had made the fastest time for the mile, 58% seconds, De Palma was put on scratch in the five miles handicap, with Lorimer, Thomas-Detroit, on 100 feet; Grant, Berliet, 700 feet, and Andrews, American, 3,200 feet. At the start it narrowed down to a fight between De Palma and Grant, but the latter had an advantage in the handicap.

Stanley Webster, Stoddard-Dayton, had no trouble in winning the curtain-raising five miles for stock touring cars and the pursuit between Seymour, in the Christic car and Basle, in the "Flying Dutchman." proved easy for the latter, as Seymour quit in the third mile.

The fastest time of the day was made by Walter Christie, driving his own car, in the mile time trials. Basle, in the Mercedes, which is better known as the "Flying Dutchman," was second in 58 seconds, Christie's time being 561/5 seconds. The summaries:

Five miles, gasolene stock touring cars—Won by Stanley Webster, 36 horsepower Stoddard-Dayton; second, R. S. Crawford, 40 horsepower Crawford; third, F. E. Wing, 40 horsepower Marmon. Time 6:103/5.

Five miles, free-for-all, gasolene stock runabouts—First heat won by Barney Oldfield, 57 horsepower Stearns; second, Ralph De Palma, 40 horsepower Allen-Kingston. Time, 5 23. Second heat won by L. B. Lorimer, 40 horsepower Thomas-Detroit; second, F. E. Wing, 40 horsepower Marmon. Time, 5:31%. Final heat won by Ralph De Palma, 40 horsepower Allen-Kingston; second, Barney Oldfield, 57 horsepower Stearns; third, L. B. Lorimer, 40 horsepower Thomas-Detroit. Time, 5:23%.

20 miles, stripped stock chassis—First heat, five miles, won by Ralph De Pafmea, 40 horsepower Allen-Kingston; second Barney Oldfield, 57 horsepower Stearns; third, Joe Matson, 32 horsepower Corbin. Time, 5:13. Second heat, five miles, won by H. F. Grant, 45 horsepower Berliet; second, L. B. Lorimer, 40 horsepower Thomas-Detroit; third, J. Andrews, 44 horsepower American. Time, 5:19½. Final heat, 20 miles, won by H. F. Grant, 45 horsepower Berliet; second, R. De Palma, 40 horsepower Allen-Kingston; third, L. B. Lorimer, 40 horsepower Thomas-Detroit. Time, 20:27½.

Special 20 miles race for 40 horsepower and less—Won by L. B. Lorimer, 40 horsepower Thomas-Detroit; second, J. S. Snyder, 36 horsepower Oldsmobile. Time, 21:56%.

Five miles Handicap, free-for-all, gasolene cars—Won by H. F. Grant, 45 horsepower Berliet, (700 feet); second, R De Palma, 40 horsepower Allen-Kingston (scratch); third, L. B. Lorimer, 40 horsepower Thomas-Detroit (100 fet). Time, 4:59%.

Five miles pursuit race—Won by Charles Basle, 90 horsepower Mercedes; Morton Seymour, 50 horsepower Christie, second. Time 4:49%.

Mile against time—Walter Christie, 563/5 seconds; Charles Basle, 58 seconds.

Chicago Postpones Its 1,000 Miles Run.

The Chicago Motor Club has postponed indefinitely its 1,000-mile reliability contest which was to have occurred June 24-27. But seven entries had been attracted.



SUPERSEDING THE WAR HORSE greatl

Gen. Grant's Estimate of the Automobile's Value in Military Operations—Practical Test at Pine Camp.

Though automobiles have been tested by army officers in respect to their utility as dispatch bearers over long distances, the army in this country has had no opportunity to observe the adaptability of motor cars for field manoeuvres until the present time. The military operations now being conducted by regular troops and State militia at Pine Camp, New York, under the direction of Gen. Grant and officers of the regu-

THE MOTOR WORLD

greatly pleased with the excellent showing made by the two machines being tested."

Nine Perfect Scores in Atlanta Run.

It required a lottery to determine the cup winners in the 382 miles sealed bonnet run from Atlanta, Ga., to Macon and return on Thursday and Friday, 18th and 19th insts. The contest was under the auspices of the Fulton County Automobile Club, backed by an Atlanta paper, which furnished the prizes.

Of 13 cars that started, nine finished with perfect scores, and as there were only three cups, one for each of the three classes of cars, they were awarded to the car in each class whose representation fished the lucky number out of a hat. The prizes went to



MAJOR-GENERAL GRANT IN THE FIELD AT PINE CAMP

lar army, have furnished an opportunity for motor car experiments, which was not to be neglected, and two cars are regularly employed in connection with the work of the troops. Both of the machines are Studebakers; one is used by Gen. Grant in the general routine of his field work, while the other is in the service of his staff.

Pine Camp consists of 144 square miles of every conceivable sort of country. Much of it consists of stumps and ruts, while the roads are nothing more or less than deep sand pits, often running over rough, steep hills. Under these conditions the machines are receiving the severest test, and it speaks well for them than Gen. Grant has expressed entire satisfaction with the results obtained from their use. In an interview, the commanding general said:

"I should not have believed that it was possible for an automobile to go the places these two Studebaker machines have gone if I myself had not witnessed it. During the week they have been here they have been put to the most severe test and haven't been out of commission for a minute. They are especially valuable in plotting out problems where it is necessary to carry maps and other paraphernalia not easily conveyed on horseback. I believe that not only is the automobile of great value in military work but, more than that, it is a necessity. I am

the Stearns in Class A, the Thomas, in Class B, and the Ford in Class C. Silver medals solaced the top-notchers who were unlucky in the drawing. There were large crowds at Atlanta to witness the start, at Macon to welcome the cars there, and at Atlanta to see the finish, while there were enthusiastic gatherings of spectators at many points along the route. An inspiriting feature of the finish was the arrival of seven of the leaders who got together just outside of Atlanta and entered the city in a sort of parade. The relative performances of the several cars were not determined until the following day, the prizes being awarded in the evening at an enthusiastic meeting of all concerned.

Class A. No. 12 White steamer No. 13 Stearns	1,000 1,000
Class B.	
No. 1 Haynes No. 2 Thomas No. 3 Oldsmobile No. 6 Grout No. 9 Pope-Hartford No. 10 Stevens-Duryea	1,000 Quit 1,000
Class C.	
No. 4 Maxwell	630 1,000 915
No. 8 Maxwell	1,000 1,000

DEALERS DIP INTO RACE CONTROL

Go Through the Motions of Taking Charge of Briarcliff Affair—Moore and Morrell in Background.

The "dozen or more dealers" who believe that they should have a great deal to say about race sanctions and disqualifications and one of whom is credited with saying that the box office should have something to say about the control of sport, finally have unveiled themselves. They prove to be some of the dealers who were "rounded up" by "good, old" Tom Moore after his wonderful Metropolitan Automobile Association, which consisted chiefly of himself, blew up, following the Motor World's illumination. Moore then formed the dealers into the Automobile Manufacturers Committee and promoted the Briarcliff road race.

Moore, who, by profession, is a press agent, was first also to discover how valuable is a man like Robert Lee Morrell to Moore's profession. Last week, Moore and Morrell went through the motions of laying down their Briarcliff plumes and duly turning them over to the "dozen or more dealers." They-that is, the chairmanship and the secretaryship, respectively-were as duly assumed by C. F. Wyckoff and Sidney B. Bowman, who are credited with saying that they again will run the Briarcliff race, whether or no the A. A. A. or the National Association of Automobile Manufacturers approve it. In due course, it is expected that Moore and Morrell will be "induced" to return to the assistance of the dealers, who, it is fair to guess, eventually will kick themselves in the shins when they realize how they have been "used" to pull other's chestnuts out of the fire.

How the A. C. A. Proves Its Best Wishes.

According to the Louisville (Ky.) Herald, emissaries of the disgruntled Automobile Club of America (of New York), were in that city last week endeavoring to induce the Louisville club to secede from the American Automobile Association, which when it found that it could not dominate the A. A. resigned therefrom, accompanying its resignation with what it styled "best wishes," and which now is engaged in proving how much they are worth.

Idealism of the New England Tour.

The New England tour of the Automobile Club of America left the club house in New York on Saturday last with 18 cars in line, including the one occupied by the manager. It was styled "the ideal tour." Some of the idealism was reflected by two rather large flags with which each car was decorated and by a set of rules which might serve as well for a touring contest or an endurance run.

PATENTS AS PRICE PROTECTORS

Their Legal Effect as Remedy for Rate Cutting not Generally Appreciated— Court Rulings on the Point.

The fact that the Weed Chain Tire Grip Co. recently was able to obtain an injunction restraining the Times Square Automobile Co. from cutting the price of its product and that subsequently Judge Ward in the United States Circuit Court in New York imposed a fine of \$100 on the price-cutters for violating the injunction, excited wide interest in the trade. It clearly indicated that where there is a will there's a way to check price-cutting, and to make it an expensive occupation.

In discussing the subject a few days since, T. F. Bourne, 220 Broadway, New York, a counsellor who makes a specialty of patent and trademark causes, and who has handled several such cases for automobile concerns, remarked that the average patent owner has not more than a very superficial knowledge of the great power in respect to the fixing and maintenance of prices which the patent gives to him. In fact, Mr. Bourne talked so interestingly to the Motor World representative that he was induced to reduce his views to writing. These views constitute a fund of information that should serve to stiffen many backbones in the automobile trade. Mr. Bourne

"The Supreme Court of the United States, in E. Bement & Sons vs. National Harrow Co., 168, U. S. 70, said:

"'The very object of these laws is monopoly, and the rule is, with few exceptions, that any conditions which are not in their very nature illegal with regard to this kind of property imposed by the patentee, and agreed to by the licensee for the right to manufacture or use or sell the article, will be upheld by the courts. The fact that the conditions in the contracts keep up the monopoly or fixed prices does not render them illegal.

"'The provision in regard to the price at which the licensee would sell the article manufactured under the license was also an appropriate and reasonable condition. It tended to keep up the price of the implements manufactured and sold, but that was only recognizing the nature of the property dealt in, and providing for its value so far as possible. This the parties were legally entitled to do. The owner of a patented article can, of course, charge such prices as he may choose, and the owner of a patent may assign it, or sell the right to manufacture and sell the article patented, upon the condition that the assignce shall charge a certain amount for such article.'

"With respect to the Interstate Commerce Act, the Court said:

"'But that statute clearly does not refer

to that kind of a restraint of interstate commerce which may arise from reasonable and legal conditions imposed upon the assignee or licensee of a patent by the owner thereof, restricting the terms upon which the article may be used and the price to be demanded therefor. Such a construction of the act, we have no doubt, was never contemplated by its framers.'

"It is thus seen that patentees have a particular and peculiar monopoly which they may exercise to their best advantage. The foregoing decision was followed in John D. Park & Sons Co. vs. Hartman, 152 Fed. Rep., 24, where the court said:

"That articles made under patents may be the subject of contracts by which their use and price in sub-sales may be controlled by the patentee, and that such contracts, if otherwise valid, are not within the terms of the act of Congress against restraints of interstate commerce or the rules of the common law against monopolies and restraints of trade, is now well settled.

'The patent grants an exclusive right to use, to make, and to sell. The patentee may grant, if he will, an unrestricted right to make and sell or use the device embodying his invention, or may grant only a restricted right in either the field of making, using, or selling. To the extent that he restricts either one of these separable rights, the article is not released from the domain of the patent and any one who violates the restrictions imposed by the patentee, with notice, is an infringer.'

"It is well established that where a dealer or jobber, or even a licensee, under a patent breaks the terms of the contract he entered into relative to the patented article, he may be sued as an infringer of the patent.

"In National Phonograph Co. vs. Schlegel, 128 Fed. Rep., 733, the Court said:

"'An unconditional and unrestricted sale by the patentee, or by a licensee authorized to make such sales, of an article embodying the patented invention or discovery, passes the article without the limits of the monopoly, and authorizes the buyer to use or sell it without restriction; but to the extent that the sale is subject to any restriction upon the use or future sale the article has not been released from the monopoly, but is within its limits, and, as against all who have notice of the restriction, is subject to the control of whoever retains the monopoly. This results from the fact that the monopoly is a substantial property right conferred by law as an inducement or stimulus to useful invention and discovery, and that it rests with the owner to say what part of his property he will reserve to himself, and what part he will transfer to others, and upon what terms he will make the transfer.'

"In Edison Phonograph Co. vs. Kaufmann, 105 Fed. Rep., 960, the Court said:

"'I cannot doubt that the complainants have the right to sell their patented phonographs with the restrictions and upon the conditions contained in their "jobber's agreement," and that dealers buying the patented instruments from the jobbers with notice of those restrictions and conditions are bound thereby.'

"Thus, the owner of a patent who manufactures and sells a patented article may reserve to himself, as an ungranted part of his monopoly, the right to fix and control the price of the patented article at which jobbers or dealers buying from him may sell to the public, and a dealer who buys from a jobber with knowledge of such reservation, and re-sells in violation of it, is an infringer of the patent, and it was under this doctrine that the chain grip case referred to above was decided.

"There is another point in patent law of importance to manufacturers of patented articles, and that is the restrictions a manufacturer may place upon the use of the goods. The manufacturer may restrict the use of the patented articles, by giving proper notice, of other parts to be used in connection with the patented atticle, even though such parts are not patented. This has been sustained by the United States Courts, in Heaton-Peninsular Button-Fastener Co. vs. Eureka Specialty Co., 77 Fed. Rep., 288; in Rupp & Wittgenfeld vs. Elliott, 131 Fed. Rep., 730, and other cases. In the first named case the licensee was given the right to use the machine only in connection with unpatented staples furnished by the plaintiff, and it was held that the owner of the patent had the right to sell such machines subject to the condition that they should be used only with fasteners manufactured by him. The machines were sold and not leased, yet the Court held that the purchaser of the machines under such circumstances would be in effect a mere licensee, and the use by him of the machines contrary to the conditions imposed would be not only a breach of the contract but a violation of the monopoly for which an injunction suit would lie. It was also held that the manufacture and sale by another party, to the users of such machines, of staples which were intended to and only could be used therein was a contributory infringement and would be enjoined. The United States Supreme Court has cited this case with approval.

"In the Rupp case machines were licensed by the patent owner with restrictions that they could be used only with wire purchased from such owner; the wire was especially adapted for the machines and put upon certain reels, and the sale of wire by others adapted and intended for use in these machines, with knowledge of such use, was prohibited. In this case the Court said:

"'The mere sale of wire which might be used in the Elliott machines, or for some other non-infringing use, would by no means constitute the appellants infringers. It is the sale of wire adapted to the infringing use, with the intent and purpose that it shall be so used, which constitutes contributory infringement.'



n, ADJUSTING CONTROL MECHANISM

Importance of Eliminating Lost Motion and Disalignment of Parts—Keeping the Gears in Register.

Transmission mechanisms do not give the owner and repairman the trouble they did up to within a short time, more especially because designers have come into a just appreciation of the requirements of the case. If the adjustment of the various parts is maintained in its proper relation, and the mechanism of control is handled with even moderate rationality, there is little danger of trouble arising from broken gear teeth, and twisted shafts, such as was so prevalent a year or two ago. At the same time there are one or two points about the average mechanism of this sort, particularly if of the so-called sliding gear type, which re-

quire especial attention from time to time.

Aside from poorly tempered metal in the gears, and distinctly abusive handling, the most prevalent cause of gear difficulties arises from lost motion in the connecting mechanism leading to the control lever, and in poor adjustment in the same quarter. The result is apt to be the same in either case, and not simply produces lack of registry between the ends of the gears when they are supposed to be in mesh, but causes them to go into and out of mesh at slightly earlier or later times than are indicated by the position of the lever. The result is that the operator experiences no small amount of uncertainty in changing gears, and in consequence, is quite apt to handle the lever much more harshly than he otherwise would do, so tending to aggravate the difficulty.

For the good of the gearset, therefore, the transmission case should be looked into periodically, and the various gears tested for accuracy of mesh, any possible lost motion in the connected linkage being sought out at the same time. It is a matter of but a few moments' inspection to try out the set in all its positions, when the cover of the case has been removed for the purpose of inserting new lubricant. If any lost motion exists, it can be taken up by adjustment, in many instances. Otherwise bushings, or possibly, new parts, may be required.

In a well made car, lack of registry in the gears, is usually a sign that something is radically wrong—a rocker arm sprung, a bracket broken or displaced, or some part pulled badly out of shape. Rectifying these slight difficulties serve to bring the handling of the machine back into its normal condition with surprising success, and also prevent the possibility of a more serious condition arising, which is apt to result directly in an accident of a disastrous nature.

For convenience and certainty in handling the car, nothing is more essential than close and accurate adjustment of the control mechanism. This principle applies most particularly to the parts regulating the transmission of power from the motor to the driving wheels.

Wonderful Promise in New Tire.

Among the bits of promise which are held out in prospect to the British motorist at this time is a new and improved form of pneumatic tire, which it is said a large firm of cable builders has been at work upon for more than two years. During this time, experiments have been made on a specially prepared testing track, upon which the tires are tried out, as mounted on an electric vehicle. All sorts of road conditions are counterfeited on the course, which is so severe that the average tire of commerce is said to give way, either from bursting or wear, in somewhere about 100 miles. The new product has been so thoroughly developed up to this time, that it will stand over 3,000 miles under similar conditions, as is claimed. In other words, it is claimed that the new tires, which are soon to go into the market, are 30 times as durable as any which have yet made their appearance.

Remedy for Blown Out Tire Casing.

Of the several possible methods of removing the difficulty which arises from a blown-out tire casing, two which readily suggest themselves are the complete renewal of the shoe, and the binding up of the wound with a band or two of the Kimball tire casing, made by the Kimball Tire Case Co., Council Bluffs, Iowa. As the latter method ensures considerable additional use to the cover without waiting on the tire man, its advantages are obvious. The Kimball tire casing is merely a series of shorts bands of steel plates linked together and surrounding the shoe, the end pieces being hooked over the flange of the rim. Any number of such bands may be used from one or two, as may be required to reinforce a weak spot, to a sufficient number to form a complete armor for the tire. In any event, they form a durable and flexible protection, secure traction where the road surface is bad, and prevent skidding.

How to Insure the Water Circulation.

On automobiles where the water circulation is dependent on the action of a frictiondriven pump, it often happens that the contact between the wheel of the pump and the fly wheel of the engine is not sufficiently firm for the purpose of circulating the water. Obviously this lack of contact will explain the cause of the water circulation being sluggish, and it is of the greatest importance that the circulation should be constant and as rapid as possible. Naturally to overcome this condition of affairs it only is necessary to increase the frictional contact between the pump and the fly wheel. Care should be taken to keep both of these wheels free from oil and grease.

"In Tubular Rivet & Stud Co. vs. O'Brien, 93 Fed. Rep., 200, it was held that where the owner of a patent for setting lacing studs licensed the use thereof on condition that the licensee should only use study manufactured by the licensor, such studs not being patented, it was an infringement for the licensee to use the machine for setting studs obtained from others in violation of the license, and it was further held that a third party who sells to the licensee studs of his own manufacture, knowing that they are to be used in the patented machine, in violation of the terms of the license and intending that they should be so used, is guilty of contributory infringement, and will be enjoined.

"This doctrine of contributory infringement is very important to patent owners. It is to the effect that one person may not sell an essential portion of a patented combination, with the knowledge that it will be used by another who manufactures the other portion of such combination, to enable the different parts to be used in the completed combination."

New Recording Speedometer-Odometre.

A new device for registering speed, as well as for recording the movement of a car. has been brought out by the Recometre Co. of America, who recently have opened an office at Seventy-fourth street and Broadway, New York City. The instrument, which is called a Recometre, consists of a speedometer and an odometer combined with mechanism designed to record upon a strip of tape a permanent record of the movement of the car. This permanent record is obtained in ink and shows the number of miles traveled, the number of minutes to the mile, the number of stops made, and the exact duration of each stop. The records are made through the medium of a self-inking recording pen whose action is governed by the same mechanism that actuates the speed indication. The construction of the Recometre permits of an examination of the tape at any time, but the record of the car for the last half hour constantly is in view. Obviously this arrangement can be used to positively settle all disputes which may arise in relation to broken traffic regulations, or questionable police timing.

One of the commendatory features of the device is that it is under the control of the owner and cannot be affected by any one not in possession of the key. The instrument is operated by a flexible shaft attached to the front of the car in the usual way, with the exception that it differs from many speed indicating devices in that the link attachment is positive and cannot be removed after it is set. This arrangement precludes the possibility of anyone tampering with the machine without the owner knowing of it. The dimensions of the instrument are 5x5x5½ inches. It is finished in polished brass and is designed as a dash attachment.



OLDSMOBILISTS HOLD REUNION

Third Annual Outing of Clan—Motorists
Beat Scribes at Baseball—New Owner
Wins Touring Car.

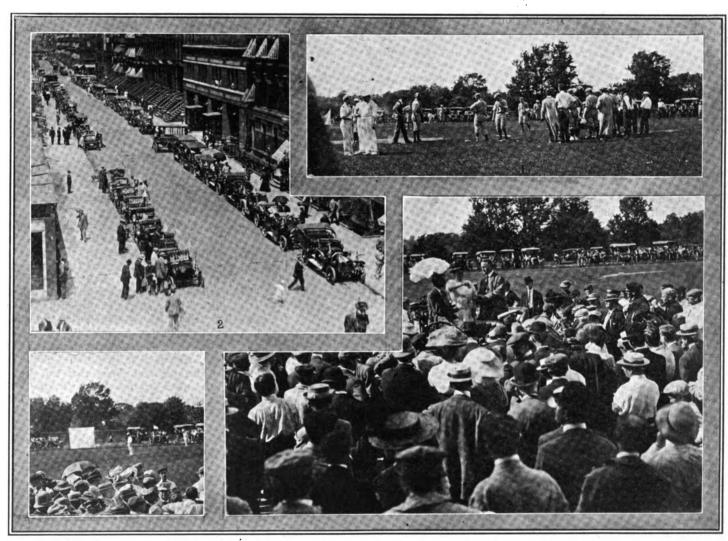
Nearly 200 owners answered the call of the Cutting-Oldsmobile clan and came together on Saturday last, 20th inst., the occasion of the gathering being the third annual reunion of Oldsmobile owners. The two former reunions were held at the EmGeneral and his staff at its head in a modern touring car. After the General came a commercial vehicle containing the Old Guard band and following them came Oldsmobiles of every type and vintage, from the little curved dash pop guns of years ago to the 1908 touring cars and roadsters.

On reaching the grounds the cars lined up around the field and then the fun began in the form of a ball game between an Oldsmobile team and one composed of newspaper men. Despite the fact that Johnny Wetmore played right field for the scribes, ticket drew the coveted prize. In winning the machine, which had been donated by the company, Schmidt exemplified the Biblical quotation "to him that hath shall be given," for only recently he entered the Olds clan through the purchase of a \$1,900 runabout. However, he accepted the prize without protestation.

Club Wars on Reckless Driving.

In the hope of checking reckless automobile drivers, the St. Paul (Minn.) Automobile Club has adopted a rule which requires

SCENES INCIDENTAL TO THE OLDSMOBILE REUNION.



1. BETWEEN INNINGS AT THE BALL GAME.

2. LINED UP FOR THE PARADE.

3. DRAWING FOR THE OLDSMOBILE.

pire City track, between New York and Yonkers, and have been marked by racing events. This year's gathering took place at Columbia oval, situated on the corner of Jerome avenue and 210th street. New York, and was signalized by a base ball game which displaced the usual racing features of the former gatherings.

This year's reunion, like its predecessors, was organized and controlled by General J. T. Cutting. The Oldsmobilists gathered in the vicinity of Fiftieth street and Broadway, where they formed in line for a parade which started at 11 o'clock, with the

and that Umpire Fred J. Wagner was full of sympathy for, and lent all the aid in his power to the newspaper writers, the Oldsmobile team won and a scorer, who feared the power of the press, charitably said that the score for the five innings was 12 to 9 in favor of the motorists.

After the ball game a drawing was held for a \$2,750 Olds of the latest type. Numbered tickets for the drawing had been issued to all the Olds owners who participated in the morning parade. L. L. Schmidt, described as a Hoboken (N. J.) hardware merchant, was the lucky individual whose

all the members to report every case of reckless driving that comes under their notice. The club engages to punish the offenders whether or not they are club members. The club also has offered a reward of \$50 to any one who establishes the identity of any driver who is concerned in an accident and drives away without identifying himself. In addition to these efforts to be of general benefit the club offers a reward of \$50, which reward of a like amount will be paid to any person who apprehends a thief who steals a machine belonging to a member of the club.

DECEPTION PUNISHED AS LARCENY

Massachusetts Court Convicts Sellers of Worthless Car—Victims Bought Off, but Compelled to Prosecute.

In Massachusetts they have laws which, if the same were to be enforced in New York State, would bring weeping, wailing and gnashing of teeth in the camps of some of the cut-rate second hand dealers in automobiles, whose methods of business have oft brought sorrow to their innocent patrons. One of these laws for the protection of the unwary has resulted in the conviction on Friday, 19th inst., of Andrew F. Gormley and Paul C. Hersey, on a charge of larceny in the Superior Criminal Court of Boston.

From the evidence in the case it was established that Gormley and Hersey advertised an automobile for sale, and claimed that the machine was in good condition (as is usually the case, see daily papers). Frederick B. Drury, of South Barrington, N. H., read the advertisement, and with his wife went to Boston, where he met the defendants and bought from them for \$200 the automobile which they had advertised as being in good condition. When the machine was tried, it was found to run down hill in very good time, but it would not go in any other direction. Drury complained to the authorities and the sellers were arrested. They were to have been tried on Friday, 12th inst., but the complainants were not in court on that day. A court officer was sent after the Drurys, and they appeared the following Friday. In the trial which followed, it was brought out that Drury had gotten back most of his money and was not especially interested in prosecuting the prisoners; the latter, however, were convicted and will be sentenced this week.

Status of Old Licenses in New Jersey.

Attorney-General McCarter, of New Jersey, has handed down an opinion regarding the validity of licenses issued by the State prior to April 16 last, when the new law was approved by the Governor, which will result in a saving of several hundred thousand dollars to the State treasury and a corresponding loss to motorists. The Attorney-General holds, and has so advised J. B. R. Smith, Commissioner of Motor Vehicles, that licenses issued in the period from January 1, 1908, to April 16, 1908, shall be good for a full year, but is of the opinion that there shall be no pro rata license fees for the fraction of a year remaining between the expiration of a license taken out in 1907 and December 31 of this year.

The opinion does away with the contention that licenses issued in 1907, no matter when, were valid until the end of this year by the amendment of the law passed last winter. Had this conception been upheld

New Jersey would have suffered a loss of several hundred thousand dollars in fees that will now have to be paid, as well as placing the State motor vehicle department in the embarrasing position of having collected nearly \$100,000 in fees illegally since the passing of the law.

"Square Deal" Plan Superseding Traps.

The "square deal" plan, by which a very general observance of the speed limit by motorists passing through the town of Middleboro, Mass., has been brought about, is attracting the attention of other town authorities in the Bay State. This plan, which has been described in the Motor World, is likely to be adopted in a number of towns, although there are some places where it is felt that the town itself would not go to the expense of displaying large banners as Middleboro has done through the local automobile club. The town of Wareham is the first to follow along the line shown by Middleboro, where the selectmen have just authorized local motorists to go ahead and display "square deal" banners. Arrangements are already started for the formation of either a permanent automobile club to have charge of the matter or to have a committee to immediately put up the speed banners and let the club organization come along in a week or two. The selectmen promise to abolish the "traps" permanently if the motorists passing through observe the "square deal" by limiting their speed to the rate specified on the banners.

Jersey Trap with Four Operators.

Supplied with about a quarter of a mile of insulated wire, a stop watch, some electric bells, six dry cells, a push button or two and a couple of ropes, to say nothing. of a few signalling flags, three Jerseyites under the leadership of L. J. Underhill-a Perth Amboy detective-are operating a variation of the usual form of constabulary speed trap in the vicinity of New Brunswick, N. J. When a car enters the trap, the man at the beginning of the block signals to Underhill, who is a quarter of a mile away, by means of the push button and bell; Underhill starts the watch, and stops it as the automobilist passes him.'- If the speed limit has been exceeded a signal is given to a flagman still further along, who signals the car to stop; if the signal is disregarded, a fourth man still further down the road is notified and he stretches a rope across the highway. When the offending car stops, a Jersey constable is at hand to uphold the majesty of the law by a prompt hearing of the charge.

El Paso Owners Organize a Club.

The El Paso Automobile Club has been organized in El Paso, Texas. The following temporary officers have been elected: Chairman, E. P. Hughes; secretary, G. R. Le Baron; chairman of executive committee, H. C. Miles; secretary of executive committee, W. R. Humphries.

CHICAGO WINS WHEEL TAX FIGHT

Supreme Court Decides in Favor of the City
Ordinance—Automobilists Organize a
New Attack.

Chicago's wheel tax ordinance has again withstood the attacks of automobilists and other vehicle owners who have been fighting it in the lower courts and in the Supreme Court. The lower courts held that the statute and the ordinance are constitutional as far as they relate to vehicles used for business purposes, but that vehicles used for pleasure are exempt from taxation under provisions of the law. The Supreme Court, Justice Cartwright dissenting, holds that all vehicles, both business and pleasure, may be taxed. The decision contains the following paragraph:

"It is urged that the Legislature is without power to authorize the City of Chicago
to pass an ordinance requiring vehicles
using its streets to pay a license fee for
keeping the streets and alleys in repair.
We think it clear that a license may be imposed and the fee for such license collected
with a view to revenue only, and if such be
the law, the fact that the license required
to be paid by said ordinance in this case is
for revenue only does not render the statute
under which the ordinance was passed and
the ordinance itself unconstitutional."

Immediate collection of the wheel tax is proposed by the city officials, and the resulting revenue is expected to give Chicago an annual fund of \$750,000 for street repairs. City Clerk McCabe was notified by First Assistant Corporation Counsel Wetten, on the 20th inst., that this decision, rendered in what is known as the Harder cases, covers practically all the points involved in the other suits pending against the validity of the measure and that it would be a waste of time to await their decision.

City records show that owners of 1.680 vehicles have already voluntarily paid \$9.806 in taxes to the city. Only eight automobiles are included in the number.

The automobilists, who have made the most determined effort to evade the tax, continued their fight on the 19th inst., when an amended bill was filed in the Superior Court by C. A. Coey and several hundred others. The automobilists make the novel plea that their machines use only parks and boulevards, which are not under control of the city, and that the municipality does not pay for their repair. They also contend that the wheel tax is a double tax on automobiles.

Greece Musters Sixty Automobiles.

In Greece there are 60 automobiles. Thirty of these are owned by residents of Athens, and the rest are scattered throughout the country. Gasolene is sold for 60 cents a gallon.



ABOUT THE OXY-ACETYLENE TORCH

Its Adaptation to Quick and Effective Welding—Marvelous Economy in Repair of Broken Parts.

Great prominence is given to the use of the new and high grade materials to which so much of the improved service of the modern car is attributable. But while the progress which has made possible their use is loudly acclaimed, the fact that it represents only a very small proportion of the progress which has been necessary in order to make their use efficient and economical is not so generally appreciated. This idea is developed in a recent bulletin issued by the technical committee of the Long Island Automobile Club, of which Louis T. Weiss is chairman, and which is one of a notable series of "pointers" to the members on the management and upkeep of their machines.

The point brought out in this connection is that following the successful adoption of ball bearings, a special metal had to be developed for the balls; that the progressive growth of high-grade steels has resulted in the introduction of special tool steels, without which it would be a practical impossibility to handle the new metals. As a crowning element in the metallurgical structure, is mentioned the discovery of a flame "hot enough to melt broken parts together, uniting them into a stronger unit than we had before it had been broken." It is with the properties and utility of this, the oxyacetylene flame, that the paper deals most particularly, and more especially with the economical phase of its use.

As is already generally known, the oxyacetylene flame, corresponds exactly to the oxy-hydrogen flame which is familiar in the mechanic arts. As used, the acetylene gas is burned in a surrounding mantle of oxygen. The chemical action is the same as when acetylene is burned in the ordinary way in the air, but as a large proportion of the air is useless for purposes of combustion, the action is less rapid than when carried on in the presence of pure oxygen. Hence the tremendous degree of heat developed, and the high temperature of the flame which approaches that of the electric arc, if not surpassing it, and has been determined to range somewhere about 6,300 degrees, Fahr.

"You have probably seen the storage battery maker use a torch with oxy-hydrogen gas in burning lead together at the terminals or connections between the several cells," says the bulletin above mentioned. "The oxy-acetylene torch produces, according to its size and the purpose used, a flame consisting of an outer mantle and the exceedingly hot, but small and pointy inner core. When the core of this flame is played onto a piece of steel, cast iron or any other metal, such surface melts immediately un-

der the terrific heat. The end of a steel wire or rod of suitable thickness (depending on the size of flame and job in hand) may be brought into the flame when it melts and flows on to the molten surface, and unites therewith thoroughly. In that manner cast iron, aluminum, brass, even steel and cast iron, etc., can be united. In case of a break of an axle, steering knuckles or any other part where the pieces must be butted together closely, the flame would not get into the break far enough to make a good job. In such a case the operator cuts enough material away so as to make a wedge-shape opening, enabling him to melt both surfaces, adding steel to fill it up from the bottom and make a perfect weld. If the mechanic is an expert with the torch he will succeed in uniting the broken part and heating it to a red heat not further than perhaps one-half of an inch distant from the break, so that a hole or screw located that distance away will not be disturbed, and a pin or nut fitting such hole or screw previous to the breaking will do so after the repair has been done.

"As before said, not the steel parts only can so be repaired quickly and effectively, but the aluminum crankcase as well as a cylinder, a lug on them or any other part, which although inexpensive cannot be obtained quickly, can be repaired quickly and satisfactorily."

Referring to a couple of instances in which the writer's own observation has enabled him to judge of the economy of the process, the case of a broken axle on a well known make of car is mentioned. The break occurred in the front axle and in the lower member of the fork receiving the steering knuckle, the part being completely broken off.

"A new axle meant an expense of about \$75," continues the report: in contradistinction to which, "it was repaired with the flame in less than an hour, and cost \$2.50. The thread in the hole, less than three-quarters of an inch away from the break, received the screw without difficulty. The axle is just as good as it ever was, and a little stronger in the place where it had been broken.

"Another, but less serious break; namely, the breaking in two of a malleable iron exhaust elbow casting, follows:

"A new elbow could have been bought for \$1.50, but it not being in the stock of the agents, a delay of ten days was probable. One dollar paid for the welding of it, and it was none the worse for looks."

Demountable Front Fenders for Cars.

Many of the better designed cars have front fenders so contrived that they may be readily dismounted when it is necessary to effect repairs upon the motor. Where such arrangements exist, it is, of course, necessary to make sure that the adjustments are kept secure whenever the machine is in use, otherwise there is danger of their getting "adrift" and injuring the machine.

TOUCHING UP AND VARNISHING

Difficulties Attending Renovation of the Body Finish—How to Meet Them—
Important Preparatory Work.

"Touching up and varnishing," is the timehonored method of refreshing the appearance of a vehicle when circumstances do not justify its being given a thorough going over. In the lore of the carriage trade it has played a most important part for many years, and naturally enough, with the development of the automobile paint shop, it has come to the front in that connection as well. But touching up a buggy and touching up a motor car are two very different things, and the experienced painter who attempts to revamp a shabby-looking car often finds himself plunged in a well-nigh hopeless task. The economy brought about by touching up a used car in some cases, is broadly offset by the poor results obtained in others when the same process is applied. And the question of choice is far more complicated than in the case of the horse-drawn vehicle. Concerning the ethics of the matter, the Carriage Monthly gives some good advice.

"To a greater extent than the horsedrawn carriage, the automobile invests the work of the painter with difficulties of a not infrequently perplexing nature," says that authority. "Taking cars as they come, the surfaces are in a worse condition than the first named class of vehicles, because, without question, a much harder form of service is imposed upon the automobile. The wrenchings and twistings, oscillation, and lateral motion, etc., despite authorities to the contrary, work injury to the surface, although such injury may not always make itself apparent until the outer film of the varnish is stripped off to some extent under the erosive effects of the rubbing pad. Moreover, the general conditions of service are of a kind to put the surface into a more or less disabled state, the varnish being badly worn in some cases, having reached possibly the incipient stage of perishing, or the color showing a faded appearance, or a lack of uniformity in the wear gener-

"Probably the worst conditioned surface, as it comes to the paint shop for repairs, is the enameled one. It is claimed that this latter finish, in the main, is harder and stronger, and better fortified to withstand hard usage than the regulation paint and varnish finish, and to a certain extent this may be true, but the enameled surface after losing the primal brilliancy of its finish, and touched off with some hefty bruises, takes on a shabbier look than the paint and varnish finish is scarcely ever capable of.

"Then, too, the surface of metal, aluminum, or steel, or iron, contributes a further share of difficulty to the touch up and var-

KEEPING TABS ON THE CHAULEEUR

Canadian Owner's System for Keeping His Car in Condition-Making the Chauffeur His Own Checker.

What is admittedly the most uncertain factor incident to motoring in its present day phases, is the human equation of the chauffeur. No matter how competent and skilled a man may be, there is always the harrowing suspicion in his employer's mind that he may be neglecting some little attention which the car requires, that he may be "faking" repairs, or that he may be using the machine for his own purposes, out of hours. Most well-ordered garages have systems designed to eliminate this uncertainty as far as possible by checking the cars in and out, and generally giving an account of the doings of the various drivers on the boarding list. Such systems have their faults, however, and are not always carried out with the integrity which is theirs nominally. A system designed to obviate many of these drawbacks, and also to account for the condition of the car in a way which a verbal report cannot do, has been originated by a Canadian motorist with the purpose of maintaining a continuous and practically automatic record of the condition of the machine and cost of its upkeep at all times.

The system involves the use of a specially prepared blank, printed on an envelope and intended to be filled out every morning before the car leaves the garage, and presented to the owner as he takes over the car for the day. The blank contains a complete report as to the condition of the machine. Within the envelope are placed receipts for any supplies or parts which may have been purchased during the previous day. No accounts are to be charged, and the enclosed vouchers furnish a complete record of all outstanding expenses current. Any repairs or supplies required are listed on the reverse side of the envelope, so that expenses due are accounted for as well. The questions appearing on the blank are

Mileage register? (total miles). Trip register? — miles. (Move to zero every morning).

Miles driven yesterday?

in the following form:

Is clock working properly? — minutes slow—fast.

Is speedometer working properly? About how many gallons of gasolene in

Are spark plugs clean and engine working

properly? Is right rear tire properly inflated? Is right forward tire properly inflated?

Is left rear tire properly inflated?
Is left forward tire properly inflated? Is tire repair outfit including pump com-

Is there an extra rear inner tube in tonneau?

Is there an extra forward inner tube in tonneau?

Is rear lamp trimmed and filled? Are front oil lamps trimmed and filled? Are acetylene lamps in good order? Is acetylene lamp generator filled with carbide and water?

Mention any tools broken or missing? Is Gabriel horn working properly? Is engine oil can in back of car filled? When was car washed last?

When was brass work polished last? Mention on back any repairs or attachments needed, damages done to car or matters which owner should be informed of.

Mention on back any supplies, gasolene,

etc., bought since last report was made (enclose receipts for bills paid). Do not have any bills charged.

Questions that can be answered "yes" mark opposite *.

It will be seen that most of the answers will be in the affirmative so long as the car is in good working condition, so that the status of the report ordinarily will be merely that of a certificate of inspection. The items referring to the condition of each of the tires individually, are of no mean importance, while the items relating to the mileage of the previous day, both by total and trip records, put an effective check on the

use of the machine. The idea was originated by Morris P. Bryant, of Montreal, a member of the Automobile Club of Canada, for his own use. There are no superfluous queries," says Motoring, in regard to it, "and the instructions to 'mention on the back of the report any matter which the owner should be informed of,' gives the chauffeur plenty of scope for suggestions, while it leaves no excuse for omissions."

Care in Manipulating Planetary Gear.

Although it is generally supposed that less skill is required in the manipulation of the common planetary change gear than is demanded by the sliding pinion type, the fact remains that unless the former system is handled with good judgment, not simply the gearset, but the entire transmission, and even the motor, will suffer greatly. The point is that it is rather difficult to determine the exact point at which the low gear should be abandoned for the direct drive. when starting from rest, or finishing a hillclimb. If the use of the low is carried too far, the resultant grinding of the gears is in itself sufficient indication of the heavy burden which is being thrown on the very small parts, which at their high rate of speed, are apt to be worn very rapidly, and even to chip, if too hard. If the high gear is applied before the car has attained sufficient momentum, on the other hand, the effect of throwing a sudden overload on the engine is apt to be even more serious.

All Metal Piping for Cooling System.

All-metal piping, with screwed connections is most desirable for use in the cooling system. Where for any reason, flexible metal tubing cannot be employed, sliding joints may be supplied at the points of

nish proposition. Many of these surfaces, around moldings and edges, show a scaly condition due to numerous causes, and in such cases the fragmentary structure of paint should be scraped away until a solid base is reached. Then touching the diseased parts with a pigment containing at least one part of oil to four parts of turpentine should follow. After a lapse of 48 hours these fractures and indentations may be puttied up with a good, hard-drying putty, which in due time can be evenly faced down with a block of rubbing stone dipped in raw linseed oil. Naturally, if such surface conditions exist to any considerable extent, the only permanent way of treating them is to either burn the paint from the surface entirely, or coat the old structure of pigment solidly under, say, three coats of roughstuff. They are not easily concealed by simply touching up and varnishing, although many of them are handled in this way, after facing up with putty as above advised, except in cases where glazing colors have been employed.

"Generally speaking, the line should be drawn on all jobs stopped for touch up and varnish which show any considerable extent of wear, because in a majority of instances of this kind the touching with color only serves to intensify the effect existing between the old and the new, and following the application of varnish, this effect is likely to increase rather than diminish.

"It has always been a question with the painter of carriages, either horse-drawn or horseless, as to what should constitute the precise dividing point between the touch up and varnish job, and the one demanding more thorough treatment; and the common understanding seems to have been reached that decision in the matter rests with the individual painter rather than with any hard and fast rule promulgated by a committee of experts.

"In all touching up and varnishing work, the surface should, after cleaning, be nicely flatted out by rubbing with water and No. 00 pumice stone flour. Then touch with color to the least possible extent, using the pigment thin enough to avoid an abrupt edge which under the varnish shows rough and patchy. Flow on a fine, heavy coat of finishing varnish, which, upon the automobile as upon no other vehicle, perhaps, plays the chief part in making the prairie like surface 'a thing of beauty'.'

Proper Joints for Water Connections.

Soldered joints and rubber hose should be avoided in all water connections involved in the cooling system of the car. Vibration cracks the solder, or, if it has not been properly applied, opens any little crevices where there has not been sufficient flux to cause it to stick. The faulty performance of rubber hose when conducting hot water, is too well known to require comment, and the destructive action of hot water on rubber makes the use of such hose costly.



HOW ONE MODERN NIMROD HUNTS

Colorado Motorist Scales High Points of the Rockies in Pursuit of Game—Big Bag for Three Hours.

While automobiles occasionally have been employed in hunting expeditions, the use for this purpose generally has been confined to a day's outing or for some special occasion, M. C. Ramsey, an enthusiastic motorist of Grand Junction, Colo., has varied the usual proceedings in this connection by making extended hunting trips through the Rocky Mountains in

and other obstructions, and to secure appliances and means of safeguarding railroad crossings and dangerous points in the highways. The organization also seeks "to promote such social relations between the members of this corporation and between this and other similar organizations as may be deemed desirable." The dues will be \$10 a year.

White Cars Resume Presidential Service.

Despite keen competition on the part of other automobile manufacturers, on the return of President Roosevelt to his summer home on Saturday, the two government White steamers resumed service at Oyster Bay, the "summer capital" of the nation.



M. C. RAMSEY DRIVING HIS RAMBLER OVER HIGH POINT IN THE ROCKIFS

a single cylinder 1904 Rambler which, in all seasons of the year and under all road conditions, he drives on long hunting excursions into the mountains after game. Early in 1908 Ramsey made a hundred mile run up the western slope and reached the highest point of the Rockies yet attained by an automobile, which shows Ramsey driving his care over this highest point on his rugged route. The accompanying illustration shows the sort of road conditions he encountered when near the end of his journey. On this occasion he returned to Grand Junction with 78 rabbits as a result of three hour's shooting.

Motor League of Rhode Island Organizes.

The Motor League of Rhode Island has been organized with the following temporary officers: President, George H. Huddy, Jr.; secretary, Joseph S. Gettler; treasurer, George C. Darling. The objects of the organization, which is to be incorporated, are to secure the enactment of just laws governing the use of the highways by all vehicles; to secure the betterment of road conditions; to promote the building of good roads; to place guide-boards, warning signals and road directions; to remove visual

The two cars are now operated on the same schedule as last year, making the first trip to Sagamore Hill at 7 in the morning and the last trip after midnight. There is but little time during the day when the cars are not engaged on some official mission. Last season, the two cars went through the four months season with a record of never having missed a trip and never having been late.

Few Starters in Albany Club's Tour.

Though 20 entries were expected for the fourth annual tour of the Albany (N. Y.) Automobile Club, only six cars actually left the capital city on Saturday last, 20th inst. The cars went direct to Greenfield, Mass., and from there to Providence, R. I., New London, Conn., and arrived in New York last evening (Wednesday). Of the six starters two have dropped out; the four contestants will leave New York to-day for Albany, over a route which will lead through Waterbury, Conn. The tourists are due in Albany to-morrow. The tour is somewhat of an endurance and reliability run, and the car returning to Albany with the seal of its bonnet unbroken will be awarded the McClure Cup.

AMERICAN ENTRY IN KEEN PURSUIT

Thomas Car Nearly Overtakes the German Protos at Irkutsk—The Italian Zust Remains far Behind.

Latest reports from the cars still engaged in the New York-Paris "race" represent that the much-repaired German Protos car—which crossed a part of the American continent on a railroad flat car—arrived at Kansk, about half way between Vladivostok and Moscow, early in the morning of the 23d inst. The run from Irkutsk, 532 miles, was made in 45 hours, or better than 266 miles per day. The car was equipped at Irkutsk with a powerful searchlight, shipped from Berlin for its use, and which enables it to travel as well by night as by day.

Lieutenant Hans Koeppen, conductor of the Protos car, who announced his arrival at Kansk in a dispatch to the Zeitung am Mittag of Berlin, announced that the American Thomas car was 24 hours behind him at Irkutsk. Reports from Paris, however, represent that the American car started only nine hours after the German car, in pursuit of it. The Thomas, according to reports from the correspondent on that car, nearly caught the Protos at Irkutsk, and in fact was up with the Germans on the eastern shore of Lake Baikal, but with only four minutes in which to load the car on the freight train that carried the Protos across the lake. Accordingly the Americans, having thus cut down a lead of two days gained by the Protos, had to stand and see the train pull out with the Germans on board. They took the next treight train to catch the evening steamer and reached Irkutsk about two hours after the German car had left that place.

The run from Irkutsk to Paris in the Peking-Paris race was made by the Itala car in forty days' actual running, or an average of 175 miles per day. The road conditions are generally good and if the Protos and Thomas cars maintain equally good speed they will arrive in Paris before the first of August.

Nothing has been heard at Berlin concerning the Italian Zust car since a St. Petersburg report of the 19th inst., when that car was said to be at Harbin.

Erle Winner of Prince Henry Cup.

Cable advices state that Fritz Erle, of Mannheim, proved the provisional winner of the contest for the Prince Henry touring cup, which ended at Frankfort-on-the-Main. Wednesday night, 17th inst. Of the 130 machines which made the start from Berlin on the 9th inst., 112 finished. The official lists, showing the actual winner, are yet to be made public. The large majority of the cars participating were of German make, but ten Belgian drivers, nine French and a few of other nationalities started.

Depot Lane Hill for Climbing Contest.

One of the big New York newspapers scored a great "scoop" and Tuesday last! It told the world that the Riverside Motor Club will, on July 8, hold a hill climbing contest on Depot Lane Hill, a short, steep, narrow grade with two sharp turns, almost right angled turns, which leads from Lafayette boulevard to Fort Washington avenue-a grade such as will justify a verdict of the manslaughter which the contest invites. There are to be contests for every type of car, not excepting taximeter cabs carrying four passengers. The newspaper which heralded the "scoop" failed, however, to remark the real news of the affair, i. e., that such an organization as the Riverside Motor Club actually is in existence in New York City. It is probable that it "grew" over night and has its habitat in a press agent's hat. It is not likely that the "club" will send his picture to the press.

Silver Trophy for Breaking Speed Law.

Chanslor & Lyons, of Los Angeles, Cal., have offered a perpetual incentive for lawbreaking-a silver trophy bearing their name, on which will be inscribed the names of all who break the record from Los Angeles to San Diego and return, a distance of 320 miles. At about the same time as the announcement of the offer of the trophy was made, L. B. Harvey was gathered in by a posse of armed sheriffs at San Luis Obispo, while engaged in shattering the San Francisco-Los Angeles record. The police of several other towns had tried to stop him, but he dashed past them, but finally was headed off by the aid of the telegraph.

California Cops to Lasso Scorchers.

In certain parts of California the lariat is to be used for the purpose of "roping" chauffeurs, much in the same manner as horses or cows are captured. By an order issued by Chief of Police W. I. Beggy, all mounted patrolmen in San Francisco are directed to carry lariats ready for use, and the policemen are instructed to lasso chauffeurs who break the speed law and do not halt when commanded to do so. To the uniniatiated it seems that considerable skill

would be required to send a rope whirling through the air in such a manner that it would find a way to get underneath a cape top, or limousine bonnet and encircle the body of an offendng driver.

Saturday an Automobile Sabbath.

Under the recently enacted amendment of the motor vehicle law of Nova Scotia the municipalities and counties of that province are passing ordinances fixing certain periods when the operation of motor vehicles is prohibited. For example, the local authorities of Yarmouth have prohibited the running of automobiles on the city streets between midnight on Friday and the same hour on Saturday of each week. Violation of the ordinance is punishable by a fine of \$20 for the first offense, \$30 for the second, and \$50 for the third. The prohibition is intended to assure the safety of country people who flock to the town on business at the end of the week.

Utilitarian Progress in Motor Vehicles.

Progress in the commercializing of the motor vehicle is more rapid than might be supposed. As illustrating the breadth of utility covered by its special applications, may be mentioned two instances which have come to notice recently. In one case, a machine had been designed for use as a cotton gatherer, and was intended to be run through the field between the rows, automatically packing the cotton into a receptacle in the body. In the other an original form of street sprinkler was combined with a self-propelled running gear, also of original design.

Automobile Line for Bradley Beach.

James H. Bradley, who founded Asbury Park and when that seaside city grew beyond his control, went farther down the Jersey coast to establish the new resort known as Bradley Beach, purposes adding an automobile line to the attractions of the place. It is to carry passengers between Fletcher Lake and Avon for a nominal fare of five cents. Whether the line will pay for itself or not is no factor in the proposition, the main idea with Mr. Bradley being to add to the pleasure of summer visitors.

Hoodoo Car "Sold for a Song."

Almost as good as winning it in a lottery is the acquisition of a four-cylinder 20 horse-power touring car for the munificent sum of \$58.79. Yet this is the sum for which Gustavus Boyd, president of the Columbus (Ind.) Machine Works, became the possessor of an automobile of the afore-mentioned description.

According to the tale told by the Columbusites, the machine has a hoodoo somewhere about it, which has not yet been routed out. The known history of the car is as follows: A few months ago a man came to Columbus with the car, which he left at the garage of a Columbus Machine Works. He wanted it to be overhauled and put in condition. The bill for the job amounted to \$58.79. Days, weeks and months passed, but no one came for the car. Mr. Boyd was anxious to find the owner, but could not do so. Finally the machine company decided to have the sheriff sell the car at auction. This was done. but nobody would bid over \$50. Then Mr. Boyd bid the amount of the repair bill and took the machine. It is said that this is the machine which went over the edge of a bridge into the Chicago river some time ago and killed four of its passengers.

Skippack Hill for Norristown Climb.

Skippack Hill, on the Reading pike, five miles above Norristown, Pa., will be the scene of what likely will prove a notable hill climbing contest on June 27th, the Norristown Automobile Club having secured permission from the authorities to use the hill for that purpose on that date. The hill rises 347 feet in 6,270, and as the surface is of fine macadam without a water break or obstruction of any kind, some fast time may be expected. The meet has been sanctioned by the American Automobile Association.

Automobiles to Race at Virginia Fair.

One day of the Virginia State Fair at Richmond, October 5-11, will be devoted wholly to automobile sport. Dr. H. W. Bassitt, chairman of the Richmond Automobile Club's racing committee, will have charge of the program.

THE OLDSMOBILE

is not only the World's Best Car, but one of its oldest and most famous.

It gives prestige to both owners and agents.

Model M
Touring Car, Fully Equipped,
\$2,750

Model MR

"Flying Roadster," Fully Equipped, \$2,750

Model Z

6-Cylinder, 130-inch Wheel Base, \$4,200

OLDS MOTOR WORKS, Lansing, Mich., U.S.A.

Members A. L. A. M.

Canadian Trade supplied from Oldsmobile Co. of Canada, Toronto, Ontario.

STRUCTURE OF EXIDE BATTERIES

Bruce Ford Sheds Light on It for the Non-Technical—Also Gives Points to Car Builders.

Storage batteries are more or less a thing of mystery to the average motorist, even though he be the owner of an electric vehicle. In a paper to be read to-day before the Society of Automobile Engineers at its Detroit meeting, Bruce Ford gives an account of the structure of the well-known Exide batteries, which cannot fail to be enlighteining to the non-technical, while he also mentions a number of points which are well worthy the attention of the manufacturers of vehicles employing storage batteries for one purpose or another.

Originally employed only for purposes of propulsion, storage batteries have now come to be used also for a variety of other purposes, such as ignition, lighting and combinations of the two. The principle of construction is the same in all cases. Differences in purpose, however, entail slight differences in construction, such as are noticeable in the case of the two classes of battery used in propelling pleasure and commercial vehicles. As, being the more common, the bulk of the paper is devoted to batteries of the latter two types.

"In design," says Mr. Ford, regarding the structure of the battery, "the positive and negative plates are similar, the positive grid, however, being thicker and heavier that that for the negative plate. The standard grids are 7-32 inch and 3-16 inch thick respectively. The grid consists of a frame around the outside of the plate, having vertical bars throughout the body of the plate spaced about 3/4 inch apart and which extend from its top to its bottom edge. There are horizontal rods of very small section flush with the surface of the grid and spaced about 1/4 inch apart on each side of the plate; the rods on one face of the plate are not placed opposite those on the other face, but midway between them, or in staggered relation. It is thus seen that the body of the grid contains open spaces about 34 inch wide, which extend from the top frame to the bottom frame and are enclosed by the horizontal facial rods; these open spaces are filled with the lead oxide paste, which, when in position, sets like cement in the form of a pencil about 3/4 inch wide, held in its position between the vertical bars and between the facial horizontal rods. The plates, after being pasted and the paste allowed to set, are given an electro-chemical formation, during which the paste or active material of the thicker plates becomes peroxidized, making them positive plates, while the active material of the thinner plates becomes reduced to porous, spongy metallic lead, making them negative plates.

"The plates are made of different sizes,

but the two sizes most used are the MV, 85% inches high by 534 inches wide, and the PV, 85% inches high by 434 inches wide. The MV is rated at seven amperes per positive plate for four hours, and the PV at six amperes for four hours; a sufficient number of cells are connected in series to give the required voltage. Each cell consists of a rubber jar, an element and electrolyte. The rubber jar consists of a deep rectangular box of hard rubber, with walls 1/8 inch thick, more or less, according to the size and service. In the bottom of the jar, and made integral with it, are bridges or ribs of height consistent with the service and whose function it is to support the weight of the element and to provide space into which is deposited the sediment thrown off by the plates with wear.

"The element consists of positive and negative plates burned to straps and kept apart by separators interposed between the positive and negative plates. In assembling an element, a negative plate is laid down with a separator, on it, then a positive plate, separator, negative plate, and so on. The plates are so placed that all the lugs of the positive plates are on one side and all the lugs of the negative plates are on the other side. A strap, consisting of a flat strip of lead or lead alloy having retangular openings in it of the same dimensions as the cross section of the lug of the plates, these openings being spaced to register with the lugs, is then placed over the plate lugs of the positive plates, and a similar strap is placed over the lugs of the negative plates. The lugs are then burned into integral union with the straps. In pleasure vehicle service it is customary to make the plate lugs comparatively short, so that the straps are somewhat below the top of the jar, and a cover consisting of a rectangular piece of hard rubber is placed on top of the straps which are furnished with projections extending through holes in the cover and by which the cells are connected by burned joints. In commercial service the batteries are usually assembled with top straps. . . .

"The separator, which has proved by experience to be the most successful, consists of a piece of wood veneer with parallel grooves about 1/4 inch wide, spaced close together and plowed out of one side, the plain sides being placed directly against the faces of the negative plates. A thin sheet of perforated hard rubber is placed against the grooved side of the wood and rests against the face of the positive plate; this perforated rubber performs a double function, in that it protects the wood from the oxidizing action of the positive active material and also tends to restrain the wearing action of the wash of the acid on the active material of the positive plate. The grooves of the wood separator are arranged vertically, and there is thus a number of free channels for circulation of the acid and for the escaping gases liberated during the action of the battery, especially toward the completion of charge. The wood of which

the separators are made is given a chemical treatment to remove substances contained in natural wood, which would otherwise do great damage to the plates.

"The cells are filled with electrolyte, which consists of a mixture of pure sulphuric acid and pure water, with a specific gravity of about 1.210. After the battery is fully charged the specific gravity reads about 1.280; the reason for this rise in gravity is that the negative plates before leaving the factory are given a slight sulphating treatment to prevent their oxidation; in giving the battery its initial charge the sulphate is reduced to spongy metallic lead, giving sulphuric acid to the electrolyte, which raises its gravity.

"In pleasure vehicle service it is customary to enclose the cells with a tight-fitting rubber cover resting on the plate straps slightly below the top of the jar, and to scal the joints with sealing compound, placing a rubber plug in a hole in the center of the cover for filling cells with water to replace evaporation, the plug being supplied with a small hole for the escape of gases. In commercial service, covers are often dispensed with altogether, as the batteries are usually in service a greater proportion of the time and require filling and inspection much oftener. . . . From 40 to 42 is the largest number of cells that it is customary to use, as more than this number cannot be charged in series from a 110-volt lighting circuit, and, without special and inconvenient apparatus, it is bad practice to charge batteries in parallel.

"The durability of a battery not only depends upon pure materials and uniformity of methods in manufacture, but also upon the care which it receives in operation. A battery could be ruined in half a dozen discharges by sufficient abuse, whereas, with good treatment the same battery might have run for several hundred discharges.

"The life of a battery with pasted plates is normally limited by life of the active material of the positive plates, which with each charge and discharge become more soft and loose at the surface, gradually washing out. As this washing out depends chiefly upon the number of charges, and, within usual limits, is practically independent of the strength or duration of the discharge current, it may be readily seen that statements of life expressed in time, or total mileage, are apt to be misleading.

"Demands are made from time to time for a battery having a greater capacity for unit of weight. It is an axiom in storage battery work that greater capacity for unit of weight means decreased durability. The simplest way to increase capacity with the same weight, is to fill the plates with a more porous paste. This results in a paste which, with use, becomes softened up and washes out more rapidly, and is not considered good practice. The preferable method is to make the plates thinner and put more of them in each cell. A plate of one-half the

time.

thickness will not have the same capacity as a plate of standard thickness, but it will have more than half the capacity. The life, expressed in number of discharges, is naturally less in the special thin plate combination. If, however, the full capacity is taken out on each discharge, the life in ampere hours, or, in other words, the mileage obtained, would be about the same as with standard plates fully discharged each

"The aim in the design of the Exide cell is to produce the greatest watt output per pound at the 4-hour rate of discharge, consistent with durability. The straps and plate lugs are not only designed with reference to mechanical strength, but also are made of cross section consistent with drop in voltage, to give the maximum watts per pounds at the cell terminals. In the vehicle battery this is a most important feature. There are many cases where the vehicle manufacturers could give advantageous consideration to the drop in conductors. An Exide cell discharging at the 4-hour rate is giving, roughly, two watts per pound or cell. In ordinary cases the most economical size of wire to use for the conductors would be that which would give a loss per pound nearly equivalent to the output per pound of battery; or a conductor loss of about two watts per pound of wire, since the number of watts per pound should be a maximum at the motor terminals and not only at the battery terminals.

"There are probably many cases where the addition of a pound to the wire or to the controller contacts would save three watts or more at the motor terminal. It would seem that aluminum is a metal particularly well suited for wiring electric vehicles, since its weight for the same conductivity is much less than that of copper. By using aluminum conductors it would, therefore, be possible to reduce the weight and also to reduce the total loss in conductors both together. . . . I have, however, never heard of aluminum being used for this purpose in this class of work.

"Storage batteries for the ignition of automobile gas engines have become quite an important development of the storage battery business. For this class of service it is not only necessary to have substantial and durable plates and fittings, but it is necessary that all the parts should be mounted in a compact and durable manner. Batteries for this class of work, at the present time at least, must be built for abuse. They are frequently discharged until practically exhausted, and they are allowed to stand in this condition. No battery worked in this manner can give the best results, and it is economy to take care of the batteries in this class of service just as it is economy to take care of them in other classes of service. The discharges, however, extend over long periods of time and. even when abused, after the battery has given comparatively few discharges it has had a considerable life, measured in time."

THE MOTOR WORLD

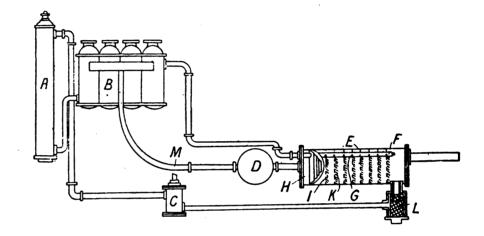
ROBS THE EXHAUST OF ITS ODOR

How the Ill Smelling Properties are Arrested by a New Foreign Invention— Simplicity of the Device.

Despite the fact that the exhaust from gasolene motors continues to be more or less obnoxious, very few complaints are heard of the offense which it causes, even in the closely congested city streets. Time was, not long since, when a number of propositions for alleviating this nuisance were suggested, while a couple of years or so ago, considerable publicity was given to the plan of a foreign inventor for perfuming

ing system of the motor. The entire circulation of cooling water is carried through the device, and no other special provisions are required.

The arrangement of the radiator, A, cylinders, B, water circulating pump, C, and exhaust pipe and muffler, M and D, are plainly marked in the illustration. The exhaust entering the deodorizer, E, meets the deflector, H, by which it is spread out into a thin and uniform spray over the entire section of the chamber. It immediately impinges against a series of gauze screens, M. which are backed by wicks, K, of asbestos or cocoanut fibre. After passing these filtering layers, the remaining gas passes off through the outlet shown at the right. The return from the water jackets of the mo-



the exhaust. That the idea still finds its adherents, however uncalled for it may appear with the present good design of the average motor, is shown by the recent introduction in England of an exhaust deodorizer. This system is the invention of Messrs. W. R. C. Wakley and R. Parsons, and is being marketed by Deas & Co., of London.

In principle, the system involves the use of a scrubber, in general arrangement not unlike those which are used for freeing coal gas from its tarry ingredients before completing its preparation as the ordinary illuminating gas of commerce. That is to say, the exhaust products from the motor are passed through a special form of filter over which a constant stream of water is passed, the result being the removal from it of a large proportion, if not of the entire amount of the sooty and tarry residue of combustion. The remaining vapor, in its cooled and filtered condition is permitted to escape in the usual manner, while the residue is washed into a receiver where it is entrained until removed during a periodical

The apparatus required to complete this process is astonishingly simple. As shown in the accompanying illustration, it comprises merely the attachment to the usual discharge pipe from the muffler of the deodorizing tank or scrubber, which also is included in the return lead of the water cool-

tor, enters the device through the spray pipe F, which distributes a fine spray throughout the chamber, and keeps the wicks and screens continually cool and moist. The overflow, carrying the impurities which have been washed from the gases, is drained into the sump, L, where the water is filtered before being returned to the circulating pump.

In practice, it is said that this system has given surprisingly good results. A deodorizer applied to one of the motor omnibuses of the London Road Car Co., worked so thoroughly that even when the motor was over-lubricated purposely, the exhaust discharged was only a white vapor which proved to be entirely free from odor. Again, as applied to a private touring car, and tested by the owner, even when adjusted to the conditions generally supposed to contribute to an obnoxious exhaust odor, it was possible to hold a sheet of white paper close to the discharge orifice without staining it.

Were any material complication involved in its design, or any expense or trouble attended its use, it would hardly seem practical to consider the purification of the exhaust, even in town car practice. If so much can be done by the simple use of the cooling water in such a way as has been described, however, the idea would seem to be well worth considering with regard to its applicability to car design.

VARIATIONS IN VALVE TIMING

Table Showing Systems Adopted by Different Makers—Useful for Both Repairmen and Owners.

Because of the considerable variation in the methods of valve timing adopted by the different makers, repairmen as well as owners, frequently become not a little embarrassed in resetting the valve gear of a motor which has been dissected without the precautionary measure of first taking note of the proper arrangement of the actuating mechanism. Such a contingency seldom arises where ordinary precautions are taken, but the bare possibility of such an event, as well as the necessity of knowing the timing when remodelling an engine, or replacing parts of the valve gear in a machine which has been smashed in an accident. make it a great convenience to have the required data at hand for an emergency.

With this object, two foreign papers, the Motor-Car Journal, in England, and Omnia, in France, have been publishing a series of articles giving the timing of the most commonly known motors of their respective countries. The accumulated results, are

given in the accompanying table, which should prove a useful piece of memoranda for those who have to deal with engines made abroad. An interesting point which is observable in this connection, is the extreme divergency of settings used. As the valve setting is regulated in large measure by the area and contour of the ports, as well as their location, and even the size of the valves, this diversity in practice abroad, indicates very clearly the lack of conformity to standards, which prevails.

Attention should be called to the distribution effected by means of the Larrad Timer. Although listed as a motor, this device, which was described in the Motor World not long since, is nothing more nor less than an attachment, which may be applied to any engine, and which is intended to facilitate the setting of valves and ignition mechanism. Furthermore, it is intended to establish a uniform setting for all motors to which it is applied, its constructors avowing that the arrangement which it secures is not simply applicable to all motors, but further intimating that its use would be beneficial when applied to motors the timing of which was not in conformity with it. How great a change this would effect in the distribution of several well known engines, as well as the probable consequences of using it is readily seen.

	Inlet Valve.		Exhaust Valve.		
Motor.	Opens.	Closes.	Opens.	Closes.	
Brasier Brouhot, 12 h.p. Charron, 20-30 h.p. Chenard-Walcker Cornilleau-St. Beuve 20-30 h. p. Cottin-Desgouttes, 18-22 h. p. Darracq, 10-12 h.p. Daimler Deasy Dennis, 28 and 35 h.p. De Dion, 12 h.p. Fiat Germain Gregoire, 10-14 h.p. Hotchkiss Labor, 20-30 h.p. Larrad Timer Motobloc Mutel Panhard, 15 and 18 h.p. Panhard, 24 h.p. Panhard, 8 and 10 h.p. Peugeot, 18-24 h.p. Rochet-Schneider, 24 h.p.	23° 30′ late 2° late dead center 20° late 35° late 30° late	20° late 42° late 44° late 44° late 44° late 18 mm. late 18 mm. late 18 mm. late 15° late 45° late 45° late 20° late 30° late 30° late 20° late 25° late 45° late	48° carly 45° carly 58° carly 15 mm. early 15 mm. early 15 mm. early 45° carly 45° carly 45° carly 45° carly 46° carly 46° carly 46° carly 46° carly 46° carly 46° carly 47° carly 48° carly 45° carly 46° carly 51° 20′ carly 52° carly 55° carly 56°	8° late 5° late 13° late 5° late 13° late 5° late dead center 6° late 8° late 10° late dead center 10° late 1-16 in. late dead center 10° late dead center 10° late dead center 13° late 15° late 15° late 15° late	
Unic. 20 h.p	34° late	40° late	30° early 53° early	dead center 10° late	

MUST SUE CITY FOR PAYMENT

How What Looked Like "Easy Money"
Wasn't so Easy as It Looked—Dispute
Over a Municipal Purchase.

Municipal ownership as it relates to motor cars occasionally develops some unusual phases, as one of the manufacturers who sold the car to the city of New York has discovered. The money obtained from the sale of such cars is not always such "easy money" as it appears to be.

According to reports that are given credence in various city departments, the company who furnished the car in question was accused by the comptroller's office of not alone supplying the municipality with a second hand vehicle but with attempting to collect for it a sum in excess of the amount for which private individuals could purchase it; the manufacturers charged \$3,500 for the car to the city, and the finance department claimed that the same model could be bought for \$3,000.

A representative of the makers appeared before the comptroller and denied that the car was second hand, while admitting that it had become shopworn and that the upholstery had been replaced owing to its having become moth-eaten. He further stated that \$3,500 was the lowest price at which anyone could purchase this model of car.

About this time the makers of the automobile received a letter from a prospective purchaser asking a quotation on the same type of car as the one under discussion. They responded and quoted \$3,250, to which the prospective purchaser replied that the price was absurd as the firm had sold one car—he named the buyer—for \$2,750. The manufacturers admitted that this statement was true but said that only one car had been sold at that figure.

In the meanwhile the heads of other city departments were interviewed and it was learned that this same model car had been offered to them for \$3,000. The various statements concerning the assortment of prices at which the car had been offered. was then forwarded by the city authorities to the manufacturer, who replied that the statements were not true and that the only price of the car in question was \$3,500 and that this price was strictly maintained, the only exception to it being in the case of the person who had bought one for \$2,750. The city, however, is not satisfied and having refused to pay the bill, the question will be left for the courts to decide.

Gasolene Cost High in Spain.

A quantity of gasolene which costs 20 cents in the United States is sold in Spain for \$2. In the latter country the cost of automobiling is as high as in any country of Europe.

COAL TAR AND PITCH FOR ROADS

Highway Commissioner Macdonald's Specification for Binder Material—Successfully Tested in Connecticut.

Coal tar and pitch combined as a binder in building macadam roads has been tried with such success by Highway Commissioner Macdonald, of Connecticut, that he has been invited to read a paper on the subject at the International Road Congress in Paris next fall. He has worked out a specification for the use of these materials and it has been adopted by a number of other highway commissioners. Something over a year ago Commissioner Macdonald chose a very hot day and laid his specification on most of the roads in Bushnell Park about the Connecticut State capitol in Hartford and the present condition of these roads, which is as good as the day the coal tar combination was put down, testifies to the excellence of the specification. Not only that, but these roads are unusually good ones on which to try out the coal tar for the reason that they are used by automobiles far more than by any other vehicles.

It happens that before he became State highway commissioner a dozen years ago, Macdonald had been for years at the head of a New Haven firm which laid, and still lays, tar and asphalt pavements, and he was peculiarly fitted to grapple with the destructiveness of automobile tires on macadam roads when it became a question of seeing the fine system of roads in Connecticut which he is building disintegrate before his eyes unless he could find a protection for them. There were two things to be done, find a road-surfacing material which is finished when laid and solid, so that it makes no dust and needs no dust to maintain its integrity, or find a method of laying the dust. Some roadmakers have not given over trying to find the latter yet, but after various and varied experiments, Commissioner Macdonald finds that a mere dust laver-which means oil, is of little value. It must be frequently renewed and cannot be repaired.

Commissioner Macdonald's specification lays great stress on the necessity for having all parts of the road perfectly dry when the coal tar and pitch surfacing is laid. After the shoulders and gutters have been formed and shaped the contractor must clean off all dirt or accumulations with split rattan brooms or a horse sweeper, until the No. 2 stone is entirely bare, clean and free from all material except such as is found in the No. 2 course, so that there is no interruption between the tar and the No. 2 course of stone. This No. 2 course is to be evened up to grade, also.

Then comes the coal tar application. About 15 per cent. of pitch is to be melted into the tar and thoroughly mixed with it,

the whole to be heated to a temperature of 225 degrees. At this temperature the mixture is flooded onto the road and broomed in with split rattan brooms. When this first application has become entirely absorbed, a second application of exactly the same thing is to be applied in just the same way, the two making a perfectly solid surface on top of and in combination with the No. 2 course of stone, which is about one inch, longest diameter, in size.

While the second application is still hot and sticky, the top dressing of trap rock splinters from one-half to three-quarters of an inch, longest diameter, is put on to a uniform depth of not less than an inch. Two inches will be even better. At once a steam road roller of not less than ten tons' weight is to be run over the surface of this, and to be kept running over it until the top dressing is thoroughly imbedded in the tar and pitch composition. Then the road must cool thoroughly before any use whatever.

There are several important conditions which must be observed, too, chief among them, perhaps, being the requirement that the day must be hot. "No water gas tar will be allowed to be used, nor any adulteration of the coal tar. Nothing but pure coal tar shall be used in the work." In several different ways the necessity for the day to be hot, the road to be dry and clean and only new and fresh stone from the quarry, free from dust, are emphasized.

What Lightning Did to a Car.

Probably all motorists who have had the experience of driving during a thunder storm have been conscious of more or less nervousness because of the vague possibility of lightning striking the mechanism. Strange to say, however, instances in which this has occurred are practically unknown. One of the few on record was the fate of an English owner who was caught in a severe storm while crossing an elevated and unprotected plateau in Sussex. The car was in an exposed position, and no shelter was available when the storm reached its climax.

"One flash was blinding," says the author of this experience, "followed by a smell of burning, and three out of the party of four got out of the car. We lay down on the ground by a little heap of hay, and it was like one imagines it must feel to be in the midst of bursting shells or bombs. We could almost feel the storm touching us. When it was over the car would not go properly, and we found that the insulating wires had evidently been struck by the lightning and the rubber was melted as if it had been in a furnace; moreover, we carried three accumulators, and the two spare ones, had been completely discharged by the action of the lightning."

"The A B C of Electricity" will aid you in understanding many things about ignition that may now seem hard of understanding. Price, 50c. The Motor World Publishing Co., 154 Nassau Street, New York City.

UP-TO-DATE HIGHWAY ROBBERY

One of the Tricks Whereby Automobilists are Made to "Stand and Deliver"—Its
Unlawful Aspect Shown.

What was supposed to be a trap designed to aid the "shaking down" of automobilists was encountered a few days ago near Niantic. Conn., by Hiram P. Maxim, of Hartford. A lot of mad and rubbish placed in the roadway, ostensibly for road repairing, suggested the possibility of a stalled automobile and a farmer with his ox team on hand, ready to "pull her through" for a consideration. Mr. Maxim, who was accompanied by one of the judges of the Superior Court, had no inclination to assist in buying fodder for the cattle, but by sheer force of bucking through the mud escaped the shakedown. On his return to Hartford he took steps to have the matter looked up by reporting the case to Schutz & Edwards, attorneys for the Automobile Club, asking for a legal opinion on such traps. Mr. Schutz sent the following reply:

"Dear Sir: Replying to yours of the 25th we beg to say that for the well being of other automobilists it is most advisable than an example be made of the scheming trap setter whom you encountered near Niantic. We have examined the statutes to see whether he is guilty of a criminal offense and the following sections seem to most nearly cover the case. Section 1181 of the General Statutes provides:

"'Every person who shall, without the written consent of the selectmen of the town, place or deposit in any public highway any stones or waste material, which shall in any way impede, hinder, obstruct or interfere with the repairs of such highway, shall be fined not more than \$7."

"Chapter 53 of the laws of 1907 provides: 'Every person who shall knowingly throw or place or cause to be thrown or placed in or upon any highway or street, any nails, tacks, glass, crockery, scrap iron, wire or substances of like nature and suffer the same to remain in and upon such highway or streets, shall be fined not more than \$20 for each offense.'

"As you will see these two statutes do not in terms exactly cover the case which you state, but the first one seems to us to be broad enough provided it could be shown that the 'repairer had no written consent from the selectmen.' It seems to us that the best way to bring the matter to a head is for us, as attorneys for the club, to write to the selectmen of the town of Niantic, calling their attention to the matter and informing them that if such an act is repeated, the perpetrator will be punished to the full extent of the law."

Mr. Maxim and Mr. Schutz have not as yet decided whether an attempt will be made to prosecute the Niantic trapsetter.



The Week's Patents.

885,585. Combination Steering and Driving Axle for Motor Vehicles. James P. Carpenter, Ithaca, Mich. Filed Oct. 14, 1907. Serial No. 397,426.

1. In a combined steering and driving axle for motor vehicles, the combination with an axle having on its opposite ends socket members, of wheel spindles having on their inner ends ball members adapted to engage said sockets on the ends of the axle, anti-frictional bearing balls arranged between said ball and socket, means to lock said socket against revolution on said ball, whereby the latter and the spindle connected thereto are driven by said axle irrespective of the angle at which said spindles are turned, and a supporting yoke connected to said axle and spindle, substantially as described.

885,646. Vehicle Tire. Mary B. Priest, Milwaukee, Wis., assignor to The Priest Tire Company, a Corporation of Wisconsin. Filed Feb. 18, 1907. Serial No. 357,809.

A vehicle tire comprising a flat metal wheel rim, a one-piece pneumatic casing having inner flanges projecting from its side wall fitted to the wheel rim, rings fitted over the inner flanges of the casing, securing bolts connecting the rings and wheel rim, a flat casing tread having flange extensions projecting beyond the side walls of said casing, cross grooves in the face of the tread, a metallic band fitted to the tread, a detachable rubber tread having flanges coincident with the flange extensions of the casing tread mounted upon the metallic band, an apertured metallic side guard having flanges engaging the flanges of said detachable tread, lips extending from the apertured portion of the side guard engaging the flange extensions of the casing, and clamping bolts in connection with the side guards fitted into the cross grooves.

885,655. Holder for Spare Tires. Edward H. Stickels, Edgewater, N. J. Filed June 16, 1906. Serial No. 322,017.

1. In a holding device for spare tires, a fixed member, a movable member slidable on the fixed member, a strap secured to and connecting the members, and means whereby the movable member will be locked to the fixed member by the tightening of the strap.

885,684. Frictional Driving Gear. Denis M. Broughton, Woodford Green, England, assignor of one-half to The British Sigarera Limited, London, England. Filed Sept. 14, 1907. Serial No. 392,830.

1. In a clutch, the combination of a shaft, a pulley mounted on said shaft and provided with a rim, a resilient strap, the tension of which is normally outward to impinge the inner surface of the rim. an arm fixed to the shaft and connected to the strap, a pivotally mounted lever pivotally connected to the opposite end of the strap, a slidable beveled member operable in the path of movement of the pivotally mounted arm to withdraw the strap out of contact with the rim.

885,704. Motor Vehicle. George J. Taylor, Salt Lake City, Utah, assignor of one-half to Alonzo E. Hyde, Salt Lake City, Utah. Filed Oct. 19, 1907. Serial No. 398, 226.

1. The combination with a motor vehicle, of a rotary fan mounted thereon in position to protect the occupant of the vehicle from wind pressure, dust, etc., and means for driving the fan in a direction to

protect the said occupant when the vehicle is in motion.

885,796. Pneumatic and Other Tires. Henry C. Shearman, Providence, R. I. Filed June 13, 1903. Serial No. 161,287.

1. In combination with a wheel rim and a tire having free ends, a lever with one end bearing on an approximate end of the tire and the other end bearing on the wheel rim at a point anterior to that occupied by the other end of lever when ends of tire are united or contact together in their allotted position on wheel rim, substantially as shown and described.

885,814. Selective Lever. Thomas W. Warner and Frank H. Jones, Muncie, Ind. Filed April 22, 1907. Serial No. 369,553.

1. The combination, in a selective lever, of a stationary structure embodying a segmental plate having a central slot or opening and notched flanges alongside said opening, a plurality of sleeved shafts, a sub-lever for each shaft and having a slot in its upper end, a spring operated engaging device secured to each sub-lever embodying a lug extending through the slot in the sub-lever pivotally mounted at the lower end and extending up through the opening in the segment, said operating lever having projections on opposite sides thereof respectively arranged to engage with and force back the lugs of the spring operated engaging devices on the corresponding sub-levers, each of said projections being of such length as when one of them is fully engaged with the corresponding sub-lever that the other will be free of engagement with the notch in the flange adjacent thereto.

885,822. Automobile. Arthur H. Wright, South St. Paul, Minn. Filed June 21, 1907. Serial No. 380,149.

1. In an automobile, the combination with a front and rear wheel supported truck, of upright cylinders carried thereby, pistons or plungers in the cylinders, fifth wheels supported upon the plungers and supporting the body of the vehicle, said plungers having at their upper ends ball-shaped heads embraced by sockets formed on the lower rings of the fifth-wheels.

885,842. Turn Table. Sterling Elliott, Newton, Mass. Filed July 5, 1907. Serial No. 382,140. Renewed March 11, 1908. Serial No. 420.455.

1. In a turntable, the combination of a bed casting having a circular track, a rotatable platform supporting frame also having a circular track, an interposed rotatable roller supporting frame having a plurality of longitudinally adjustable radially disposed shafts, and an anti-friction roller on each shaft which engages said tracks, substantially as described.

885,845. Vehicle Suspension. Robert G. Handy, Bay City, Mich. Filed Dec. 17, 1906. Serial No. 348,129.

1. In a motor vehicle, the combination with an axle, a body supporting frame, a strut substantially parallel to the axle and a spring yielding means supporting the frame on a strut, of a pair of obliquely crossed, independent bars in a plane substantially parallel to the axle, each articulating an end of the strut to the remote end of the axle.

885,848. Circuit Breaker for Automobiles. William C. Horner, Indianapolis, Ind. Filed May 27, 1907. Serial No. 375, 963.

1. In an automobile, the combination, with the sparking circuit of an internal

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

FOR SALE—Pierce Great Arrow 1908
Light Six. Absolutely new, run less
than 300 miles. Cost \$5,750. Color, Brewster green, light green stripe. Owner cannot afford to keep car and will sell it at a
sacrifice. Address HENRY WILLIS, Box
704, Rochester, N. Y.

FOR SALE—Reasonable, all or part patent No. 882,998, six wheel logging automobile, for loading and transporting saw logs. N. F. COFFEY. Black Rock, Ark.

FOR SALE—\$100 to \$500 saved. Buy a good second hand car now for next season. Write me to see how much I can save you on others' sacrifice prices. Light touring cars and roadsters, including Thomas, Pierce, Packard and Peerless, and other standard makes from \$640 to \$1,680. C. T. PAXTON, 1200 Niagara St., Buffalo, N. Y.

FOR SALE—300 sets 28x3 best grade artillery wheels, fitted with clincher rims, less hubs. Write for bargain prices on single sets or the lot. THOMAS B. JEFFERY & COMPANY, Kenosha, Wis.

"REMY MAGNETO"

Means absolute reliability
of the ignition system.
Investigate for your 1908 car.
REMY ELECTRIC GO., Anderson, lad.

Garford

Eastern Inquiries
Garford Motor Car Co.
of New York,
1540 Broadway,
New York City.
Western Inquiries
Garford Motor Car Co.
of Cleveland,
1372 East 12th St.,
Cleveland,

Address





COMPLETE COURSE AUTOMOBILE INSTRUCTION

Invaluable to the owner or prospective owner of a motor car. Practical and to the point. Send for prospectus to the

Correspondence School of Motor Car Practice Tarrytown, N. Y. combustion engine, of a spark timer controlling lever, a throttle valve lever, and means controlled by each of said levers for breaking the sparking circuit when either of said levers is brought to proper position.

885,860. Resilient Vehicle Tire. Harry A. Palmer, Akron. Ohio. Filed May 31, 1907. Serial No. 376,693.

1. The combination of a wheel rim, flanges adapted to be secured to the sides thereof, lugs on the inner face of said flanges, a sectional resilient tire composed of resilient sections having their sides in close contact, transverse rods or rivets extending through said sections so as to engage the lugs on the inner faces of the flanges, and loose endless rings between the tire sections embracing said rods or rivets, substantially as set forth.

885,878. Steering Rod Connection. John F. Skirrow, East Orange, N. J. Filed Nov. 4, 1907. Serial No. 400,476.

1. A steering rod connection comprising two members one of which is formed with a ball and the other with a socket to receive said ball, yieldable means within the socket to retain the ball member therein, a yieldable retainer connected to the ballcarrying member and extending around the socket member whereby the two members will be held yieldingly together and said members may have a movement with respect to each other

THE THOMAS

America's Champion in the New York-Paris Race.

Send for map and route card.

E. R. THOMAS MOTOR COMPANY BUFFALO, N. Y.

Member A. L. A. M.



THE
INDEX
IS RIGHT

Built to outwear an auto, and it will

Send for Booklet

Index Speed Indicator Co.

MINNAPOLIS. MINN.

FRANKLIN Automobiles

Does Franklin air-cooling cool? Over 5,000 Franklins are in active use. Catalogue tells what else it does. Write for it.

H. H. FRANKLIN MFG. CO., Syracuse, N. Y.

MORGAN & WRIGHT TIRES

ARE GOOD TIRES

You can run your motor at SLOWER SPEED on the magneto with an

EISEMANN

than with any other

MAGNETO

LAVALETTE & CO., 112 West 42nd Street, New York

SPARK PLUGS can be relied on under all conditions. Stay right longest. No. 55 STA-RITE, at \$1. outlasts two ordinary plugs. Other styles, \$1.25, \$1.50. R. E. HARDY CO., 25 W. 42d Street, New York.



New and Absolutely Fireproof.

HOTEL TULLER
Adams Ave. & Park St.
DETROIT MICH

AUTOMOBILE HEADQUARTERS

In center of Theatre, Shopping and Business dictrict. Club Breakfast, 40c. up. A la Carte Cafe, Grill Rooms. Every room with bath. Rates \$1.50 per day up.

L. W. TULLER, Prop.

M. A. SHAW, Mgr.

"Firestone"

SIDE-WIRE SOLID MOTOR TIRES
THE WORLD'S STANDARD
FIRESTONE TIRE & RUBBER CO., Akron, Ohio

STEWART SPEEDOMETERS OUTCLASS ALL OTHERS

Workmanship is superior. Materials costlier. Design more attractive. Flexible shaft stronger. Stewart Model \$40. American \$25. Guaranteed Absolutely for Five Years. STEWART & CLARK MFG. CO., 509 Diversey Boulevard, Chicago, U. S. A.





Thirty miles on one gallon of gasolene.
Thirty miles per hour. Cost of upkeep small. Always ready, winter and summer. Over any kind of roads. We build surreys and traps. Prompt shipment. Ask for catalog 250.

W. H. KIBLINGER CO.

Auburn, Ind.



How Are Your Batteries?

A CONNECTICUT VOLT

AMMETER WILL TELL YOU

Guaranteed, and the price is right, send for catalogue and trade discounts.

CONNECTICUT
TELEPHONE and ELECTRIC CO., Inc.,
Meriden, Conn.

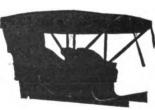


Continental Ready-Flated Tires. They reduce tire expense

CONTINENTAL CAOUTCHOUC COMPANY
1788-1790 Broadway, cor. 58th St. New York City.

"Keep your eye on Continentals"

SPRINGFIELD TOP (Pat. 1895) Aluminum Bodies SPRINGFIELD METAL BODY CO., 366 Birnie Ave., Springfield, Mass.





Steel Tires

Full of Air.
Tire expense cut in two.
Cannot Blow Out

Rim Cut or Puncture

As Flexible as Rubber Anti-Skid

Thousands in use.

Kimball Tire Case Co.
172 Broadway
Council Bluffs, Iowa

SMITH AXLES

For Light Runabouts

TYPE "C" REAR AXLE

Bevel Cear Drive Roller and Ball Bearings Internal Expansion Brakes

Drawings and Prices on Request.

A. O. SMITH CO.
243 Clinton Street, MILWAUKEE







For catalogues, address
THE CONTINENTAL AUTO MFG. CO.

INVESTIGATE

The Great Smith Car

SMITH AUTO. CO., MPRS.

TOPEKA, KANSAS

WE WILL NOT

accept your contract unless we can give you the delivery you require. We will not accept more contracts than we can fill with proper attention to each. We make Pressed Steel Frames and Automobile Stampings.

THE HYDRAULIC PRESSED STEEL CO.,
Cleveland. Ohio.



THE MOTOR WORLD PUBLISHING COMPANY
154 Nassau Street, New York

Enclosed find \$2.00 for which enter my subscription to The Dotor World

for	one	year,	commencing	with th	e issue	of	
Na	me_						

Address

This is the

PULLMAN



4-40 Roadster. Price, \$3,000.

that made the run from Philadelphia to Savannah, Ga., March 5th to 18th, through mud up to the radiator, beating all previous records.

> YORK MOTOR CAR CO., York, Pa.



1908 Model D. 50 H. P.
Ne:/ factory, Saginaw, Mich.
Complete catalogue now ready.
RAINIER MOTOR CAR COM:/ANY,
Broadway, cor. 56th St.
New York.

Exclusive LOGAN

3-Front axle heavy I beam manganese bronze, specially trussed by patented device.

For other features write for catalog to

THE LOGAN CONSTRUCTION COMPANY, Chilhcothe, O.

Before You Buy a Car

want to be shown the "silent argument" the Mitchell offers in demonstration. He'll be glad to show you—call him up—it's worth money to you if you are thinking of buying an automobile. (No obligation.)

MITCHELL MOTOR CAR CO..
283 Mitchell St., RACINE, WIS.

"AURORA" THE

Runabout \$775—20 H. P. Commercial Wagon \$1000—20 H. P.

Live proposition to agenta.

AURORA MOTOR WORKS.

Aurora, Ill.

A SUPERB LINE OF CARS-THE JACKSON
"No Sand Too Deep—No Hill Too Steep." 2-Cylinder and 4-Cylinder Runabouts, Roadsters, Touring Cars, 15 H. P., 24 H. P., 35 H. P. Prices, \$850, \$1,250, \$1,500, \$2,000. JACKSON AUTOMOBILE CO. Jackson, Mich.



"CONTINENTAL" MOTORS ARE STANDARD



Get our quotations on high grade
two and four cylinder motors, 10 to 45
horsepower. They
are equipped with
self-contained oiling
system and ready
for attaching magneto. Highest
grade workmanship,
efficient, durable efficient, durable efficient, durable and simple. Also clutches and trans-Send for catalogue.

CONTINENTAL MOTOR MFG CO., Muskegen, Mich. K. FRANKLIN PETERSON, Western Represent-ative, 166 E. Lake St., Chicago, Ill.

T. J. WETZEL, Eastern Representative, 29 West 42d St., New York, N. Y.

THE MARMON

For catalog, address Dept. 16. NORDYKE & MARMON CO. INDIANAPOLIS, IND. (Estab. 1851)

TRUFFAULT-HARTFORD

SHOCK ABSORBER

Mark

The Device that made Safe, Speedy and Comfortable Automobiling Possible. Write for catalogue, Department D.

HARTFORD SUSPENSION CO.

E. V. Hartford, Pres. 145 Bay St., Jersey City, N. J.

McCORD

LUBRICATORS — RADIATORS

"Marks of a Good Motor Car"

MCKIM COPPER-ASBESTOS GASKETS

McCORD & COMPANY

NEW YORK-Hudson Terminal, 50 Church Street. Old Colony Building, CHICAGO.

The Truth About the Automobile and What It Costs to Maintain One A 64 page booklet containing sworn statements of 158 users of the

SINGLE CYLINDER CADILLAC

showing actual cost of maintaining their cars. It also contains much advice of value to the automobile buyer. Ask for free copy of Rooklet No. 6.

CADILLAC MOTOR CAR COMPANY, Detroit, Mich.

Member Assn. Licensed Auto. Mfrs.

Wico Adjustable Spark Plug

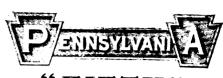


\$1.00 **Each** Guaranteed

One Year

WITHERBEE IGNITER CO.,

1876 Broadway, New York



FIFTY,



The best car that America has yet produced.

Pennsylvania Auto Motor Co. BRYN MAWR, PENNSYLVANIA

A DUPLICATION, NOT AN IMITATION OF LEATHER.

AUTOFOID is a peculiar name.

Try to remember it when next you are ordering material for tops, cushions, etc.

AMERICAN LEATHERETTE MFG. CO. Buffalo, New York.



APPERSON Model "O"

A New Low Priced Car Ready for Dealers.

APPERSON BROS. AUTOMOBILE CO., Kokomo, Indiana. Members A. L. A. M.

To Owners of Cars Costing Over \$1800

Add the meat, snappy little Brush \$500 Run-about to your stable. Will save its cost in depreciation, tires, etc., in one season and is just as good for 75 per cent. of your work. BRUSH RUNABOUT COMPANY, Detroit

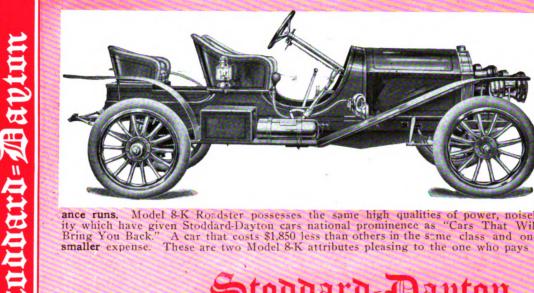


Nuts That Require Tightening After considerable use the bolts driving wheels of chain driven cars tend to become loosened in the spokes. Hence, when overhauling an old car, it is well to tighten the nuts which hold them in place, riveting over the ends for the sake of security. In doing this care should be taken not to throw the sprocket out of line.—From "Motor World," August 8, '07.

Use Columbia Lock Nuts

GOLUMBIA NUT & BOLT CO.. Inc.. Bridgeport, Cenn.

Stoddard-Warton 1908



"THERE and BACK' at a **Big Saving**

E VERY Stod machine that leaves our big shops is built for endurard=Naar

ance runs. Model 8-K Roadster possesses the same high qualities of power, noiseless ease and dependability which have given Stoddard-Dayton cars national prominence as "Cars That Will Take You There and Bring You Back." A car that costs \$1,850 less than others in the same class and one that is maintained at smaller expense. These are two Model 8-K attributes pleasing to the one who pays the bills.

otoddard-Dayton

Stoddard-Dayton 8-K Roadster is a rakish machine—the sensation of the year. Climbs hills like the wind. Motor, valve-in-head type, four cylinders, cast in pairs, 434x5 inches. 40-45 H. P. Transmission, selective sliding gear type, three speeds forward and reverse. Price, \$2,500 F. O. B. Dayton. Extras: Magneto, \$200; Top, \$75. Send for 1908 Catalog.

THE DAYTON MOTOR CAR COMPANY, DAYTON, OHIO

Stoddard-Bayton 1908



The Severest Tests

have demonstrated time and time again that the principles employed in

Timken Roller Bearings

are the only correct ones that insure perfect transmission of all power to traction use, eliminating both friction load and end thrust.

A Stoddard Dayton Stock Car equipped complete with Timken Roller Bearings finished April 12th, a ten-day century run, 1,000 miles over the roughest roads with all adjustments sealed, something impossible for a car equipped with the ordinary

type of bearings to perform. This car, as do all cars of the Stoddard Dayton make, carries a full equipment of Timken Roller Bearings, as tests made under the most adverse and severe conditions have proven them an economical factor in the saving in wear and tear from strain alone.

And these are some of the reasons why more than 65 per cent. of all the makers of high grade American Automobiles and over 90 per cent. of the Commercial Truck builders are now using them. Are you? If not, won't you let us give you some figures that prove. These are yours for the asking.

The Timken Roller Bearing Axle Company, Canton, Ohio Branches: 10 East 31st Street, New York 429 Wabash Avenue, Chicago

READVILLE

Gave 5 out of 6 Events to

Diamond WRAPPED TREAD TIRES

THE BEST CASINGS—THE BEST TUBES

INCLUDING

20-Mile Track Record Special 20-Mile Race Five Mile Handicap

THE DIAMOND RUBBER CO.
Akron, Ohlo



Digitized by Google





ी। जाज

